Glan Llyn, Newport

Phase 5E1

Chemical Validation Report

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Chemical Validation Report

for

Revantage Real Estate

September 2025

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1.0 Introduction

1.1 Terms of Reference

Rodgers Leask Ltd (RLL) has been commissioned by Revantage Real Estate (RRE) Ltd to prepare a Chemical Validation Report following the remediation of Phase 5E1 of the Glan Llyn development in Newport (hereafter referred to as the 'Site'). The Site is situated within the Glan Llyn development on the site of the former Llanwern Steelworks. The Site location is shown on RLL drawing 18669-RLL-21-XX-DR-O-0173-P02 (**Appendix A**).

In July 2024 the Client, St Modwen Developments were rebranded to be called Revantage Real Estate. Any reference to the previous company name in this report should be referred to accordingly.

This report should be read in conjunction with the Glan Llyn Remediation Strategy (Ref. 18669-RLL-21-XX-RP-O-0157), the Phase 5E1 Remediation Strategy (18669-RLL-23-XX-RP-O-0474-P02), the Glan Llyn: Soils Validation Strategy for Protection of Controlled Waters (Ref. 30937 R2) and the Phase 5E1 & 5E2 Earthworks Specification (Ref. 18669-RLL-22-XX-RP-O-0214). The relevant earthworks performance criteria have been included in this validation report for ease of reference.

1.2 Objectives

In accordance with the requirements of Planning Condition 28 of Outline Planning Permission Reference 06/0471, this report has been prepared to verify that the remediation works, undertaken by McCarthy Contractors (Bridgend) Ltd within Phase 5E1 between May and September 2022, were completed in general accordance with the RLL Earthworks Specification, the Glan Llyn: Soils Validation Strategy for Protection of Controlled Waters, the RLL Phase 5E1 Remediation Strategy and the Phase 5E1 Remediation Strategy.

1.3 Proposed Development

It is understood that the Site is proposed to be redeveloped for a residential end use. An illustrative masterplan (ref. 8111-08-A011, dated April 2019) is available in **Appendix A**. Phase 5E1 will form part of the wider Glan Llyn development.

1.4 Purpose

This report has been prepared pursuant to the partial discharge (P1 - pre-construction stage) of Planning Condition 28 of the Outline Planning Permission Reference 06/0471 for the proposed development of residential development Phase 5E1 as part of a wider mixed-use development at Llanwern, Newport.

Planning Condition 28 states the following:

Prior to the commencement of each phase of development as defined by Condition 03 (that is any development excluding that required as part of the remediation

strategy), unless an alternative timescale for the component parts of that phase and/ or for specific remediation works has firstly been agreed in writing by the Local Planning Authority, a verification report demonstrating completion of the works set out in the approved remediation strategy for that phase (or each part of the phase if an alternative timescale has been agreed by the Local Planning Authority for the component parts) and the effectiveness of the remediation shall be submitted and approved, in writing, by the Local Planning Authority. The report shall include results of sampling and monitoring carried out in accordance with the approved verification plan for that phase to demonstrate that the site remediation criteria has been met. It shall also include any plan for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the Local Planning Authority.

Reason: To demonstrate that the remediation criteria elating to controlled waters have been met and (if necessary) to secure longer-term monitoring of groundwater quality. This will ensure that there are no longer remaining unacceptable risks to controlled waters following remediation of the site and in the interests of residential amenities and human health.

A non-material amendment has been made to the planning permission 06/0471, to allow for a phased approach to the discharge of Condition 28 where developer and housebuilder requirements have been clearly divided. PC28-1 relates to pre-construction stage validation, and PC28-2 relates to the construction stage validation.

The report has been produced pursuant to the partial discharge of PC28 relating to the interim state of remediation following pre-construction stage works (PC28-1). This will include chemical validation reports covering risk to human health and risk to controlled waters for pre-construction remedial works, demonstrating that these works be undertaken in accordance with the approved Remediation Strategy and the Glan Llyn: Soils Validation Strategy for Protection of Controlled Waters.

To discharge PC28 in full for each phase, the future housebuilder undertaking the construction phase will be required to provide suitable documentation to demonstrate that the construction phase remedial works (PC28-2) have been completed to a satisfactory condition.

1.5 References

The following documents have been referred to in the preparation of this report:

- Glan Llyn Phase 5E1 Desk Study and Phase 2 Geo-Environmental Report, RLL, ref. 18669-RLE-21-XX-RP-O-0183-P04, August 2023 (**Ref. 1**).
- Glan Llyn Llanwern (Sitewide) Detailed Quantitative Controlled Waters Risk Assessment (CWDQRA) 2017, Atkins, 5111373-LLA-OUT-0257 Rev. 3.0, February 2017 (**Ref. 2**).
- Glan Llyn Phase 5E1 and 5E2 Earthworks Specification, RLL, ref. 18669-RLL-22-XX-RP-O-0214, dated February 2021 (**Ref. 3**).
- Phase 5E1 Remediation Strategy, RLL, ref. 18669-RLL-23-XX-RP-O-0474, August 2023 (**Ref. 4**).

- Glan Llyn, Phase 5E1 Geotechnical Validation Report, RLL, ref. 18699-RLL-23-XX-RP-O-0433, December 2023 (**Ref. 5**).
- Former Llanwern Steelworks Site Assessment of Asbestos Contamination, The Institute of Occupational Medicine (IOM), 610-34464, March 2014 (**Ref. 6**).
- Glan Llyn Remediation Strategy Addendum Information, RLL, ref. 18669-RLL-22-XX-RP-O-0192, dated January 2022 (**Ref. 7**)
- Glan Llyn: Soils Validation Strategy for Protection of Controlled Waters Hannah Fraser Consulting Ref. 30937 R2, dated December 2024 (**Ref. 8**)
- Glan Llyn CWDQRA (2019 update), RLL ref. 18669-RLL-19-XX-RP-O-0006_Rev A, dated June 2022 (**Ref. 9**)

1.6 Limitations and Confidentiality

All conclusions and recommendations made within this report are based upon and limited to the factual information obtained as part of these works. No responsibility can be taken by RLL for information obtained by third parties and it has been assumed that all third party information provided is true and correct.

RLL has undertaken the work in accordance with our understanding of current best practice at the time of undertaking the work. Further assessment and revision of this report may be required should new information come to light or legislation/changes to best practice be introduced after the date of issue of the report.

RLL has prepared the report for the sole use and reliance of the Client. The report may not be used or relied upon by any unauthorised third party without the explicit written agreement of RLL.

The interpretive work undertaken within this report remains the intellectual property of RLL and must not be divulged to any commercial third party without prior written agreement of RLL.

2.0 Site Characteristics

2.1 Site Location and Description

The Site is located within the Glan Llyn development at the former Llanwern Steelworks, approximately 5.5km to the east of Newport City Centre centred at National Grid Reference 336462E, 186614N. The site location plan is shown on drawing 18669-RLE-21-XX-DR-O-0173-P02, **Appendix A**.

The Site is irregular in shape, covers an area of approximately 7.03ha, and is located near the southeast boundary of the residential part of the wider Glan Llyn development. The Site historically housed conveyors, hoppers, a stockhouse and railway sidings associated with the Llanwern Steelworks. Following closure of the steelworks and prior to the completion of remedial earthworks, the Site comprised an area used for the stockpiling of materials from the wider Glan Llyn development.

The nearest surface water course on completion of the development is proposed to be Kings Wall Reen, located approximately 10m north of the Site. Monk's Ditch is located approximately 100m east of the Site, it is separated from the former steelworks drainage bypassing site in a concrete channel; numerous other surface water features are recorded within 500m, mostly comprising reens and drains.

The Site boundary is shown on drawing 02554-F-5e110-P0, **Appendix A**.

2.2 Site History Summary

Historically, the Site exclusively comprised agricultural land segregated into part of eight fields by hedgerows and drains, until 1967 where the Site was shown to form part of the Llanwern Steelworks, housing conveyors, hoppers, a stockhouse and associated infrastructure, including a raised access ramp and ore/ coal stockyards. Railway sidings were present in the west, extending northwards offsite, also associated with the wider steelworks. The Site was demolished to slab level by 2004 (**Ref. 1**).

2.3 Ground Conditions and Contamination Summary

Historical and recent ground investigations undertaken prior to the remediation works, as summarised in the RLL Phase 2 Report (**Ref. 1**), generally identified the following conditions across the Site:

- Made Ground at thicknesses of 0.50m to 4.00m, comprising soft to firm gravelly clay with occasional to frequent cobbles; fused slag/ gravel and cobbles of slag; or clayey gravelly sand. Cobbles and gravel comprised concrete, clinker, limestone, brick, slate, slag, mudstone, quartzite and occasionally with fragments of metal or rebar.
- Tidal Flat Deposits from 1.10m to 11.30m, consisting of as very soft to firm bluish grey occasionally peaty clay. Rootlets, roots and gravel-sized peaty pockets were common throughout the strata horizons.
- Mercia Mudstone Group from 10.00m, described as extremely weak mudstone.

Buried obstructions such as concrete, asphalt and fused slag were encountered in fifteen locations between 0.12m to at least 2.00m, and generally comprised concrete, slag, asphalt or metal artifacts.

Isolated sheens or hydrocarbon odours were encountered in five locations in the Made Ground at depths ranging from 0.50m to 1.35m.

Chemical analysis of 61 samples taken during the previous ground investigation identified exceedances of the approved reuse criteria for arsenic, chromium, lead, mercury, nickel, vanadium, benzo(b)fluoranthene, benzo(a)pyrene, and dibenz(a,h)anthracene. Further details of this assessment are presented in RLL's Desk Study and Phase 2 Geo-Environmental Report (**Ref. 1**). Asbestos was identified in two of the 30 samples analysed, both comprised chrysotile (white) asbestos.

Perched groundwater was encountered in 24 locations, typically within the Made Ground or at the Made Ground – Tidal Flat Deposits boundary at depth from 0.30m to 1.80m.

According to the Atkins DQCWRA (**Ref. 2**) regional groundwater is typically encountered within a gravelly fine to coarse sand at approximately 9mbgl towards the base of the Tidal Flat Deposits. The groundwater is typically sub artesian, confined by the clay rich Tidal Flat Deposits at approximately 9mbgl, with a rest water level of approximately 2mbgl.

3.0 Enabling Works

3.1 Earthworks Summary

During previous intrusive ground investigations on Phase 5E1, the Made Ground was found to contain numerous buried obstructions including structures and buried fused slag, as well as heavy metals, PAHs and asbestos. As such, remediation works were required.

Remedial earthworks were undertaken by McCarthy Contractors (Bridgend) Ltd between April 2022 and September 2022.

The works included an approximate area of 70,300m^2 and was completed in accordance with the RLL Phase 5E1 and 5E2 Earthworks Specification (**Ref. 3**) and the Remediation Strategy (**Ref. 4**). The earthworks generally comprised:

- Site clearance;
- Excavation of Made Ground to natural underlying Tidal Flat Deposits;
- Removal of Made Ground from Site with evidence of gross visual and olfactory contamination;
- Removal of below ground obstructions;
- Cropping of piles to the level of the underlying Tidal Flat Deposits;
- Re-engineering of Made Ground;
- In situ geotechnical testing;
- Soft spot excavation/ removal; and
- Monitoring for compliance with relevant specifications.

The purpose of the remedial earthworks was to remove material assessed as unsuitable following the chemical testing on a 25m grid, and turn-over the remaining Made Ground to expose the underlying natural clay. The turnover allowed for the removal of additional unsuitable material with evidence of visual and olfactory contamination, as well as removal of material assessed as unsuitable for reuse following a 25m trial pitting exercise.

Material assessed as unsuitable for re-use in a residential scenario during the fill operation on Phase 5E1 was re-located, where suitable, to the commercial area for use as an engineering fill at depth in accordance with the wider site Material Management Plan. Material suitable for reuse in the commercial area will be recorded as part of the validation reports for that area.

Drawing 18669-RLL-23-XX-DR-O-0443-P02 (**Appendix A**) shows the sources of material and material movement within the phase, the primary sources being the excavated Made Ground from within the phase and pre-validated Made Ground stockpiles from the wider development.

The natural Tidal Flat Deposits were chemically validated during the earthworks operation, locations shown in RLL Drawing 18669-RLL-22-XX-DR-O-0326 REV C (**Appendix A**).

The turnover of approximately 115,000m^3 of Made Ground allowed for the surveying of the natural clay at the base of excavation, as shown on the McCarthy Contractors (Bridgend) Ltd 'Phase 5E1 Base of Excavation Clay Levels' drawing in **Appendix A**. Retained supporting piles and exceptional obstructions are shown on McCarthy Contractors (Bridgend) Ltd 'Phase 5E1 As Built Structures/ Obstructions' drawing also in **Appendix A**.

Approximately 60,000m^3 of stockpiled site won suitable material was imported to the site to achieve the formation levels. Chemical testing of the imported material is presented in Section 4.

The reengineering of the material to create a low permeability layer of Made Ground is in accordance with the Remediation Strategy (**Ref. 4**). The works also enabled existing obstructions to be uncovered and, where possible, removed.

In accordance with the RLL Earthworks Specification (**Ref. 3**) material excavated from Phase 5E1 and material located within stockpiles on the wider Glan Llyn development was to be used as fill within the Site to achieve the formation level of between 5.80mAOD and 7.30mAOD. The material was reengineered to achieve 95% compaction and <10% air voids. The Site is approximately 750mm below the proposed final levels, to allow for placement clean cover.

The final earthworks levels are shown on the McCarthy Contractors (Bridgend) Ltd drawing 'Phase 5E1 Topo As Built Levels' in **Appendix A**. Photographs of the earthworks operation are presented in **Appendix B**.

3.2 Geotechnical Assessment

Geotechnical validation of the earthworks comprised laboratory geotechnical testing, California Bearing Ratio (CBR) testing, Electronic Soil Density Gauge (SDG) Non-Nuclear Test, and expansivity testing of the slag material. The appropriate compaction of the material is relevant in terms of limiting/ reducing the permeability to support the Remediation Strategy.

197 particle size distribution tests were undertaken on samples of the fill material used at the Site. The results indicated that the fill comprised clayey sandy gravel with occasional cobbles. 174 samples were classed as 2C – stony cohesive material <15% fines) which is a General Cohesive Fill; and 23 samples were classed 1B – uniformly graded granular material (≥15% fines) which is a General Granular Fill.

Table 3.1 summarises the relevant performance criteria for material compaction set out in the earthworks specification and the in-situ test results recording compliance in accordance with the earthworks specification.

Table 3.1 – Relevant Earthworks Performance Criteria & Validation Results					
Test	Required Limits		In-situ Results **		
	Min	Max	Min	Max	Average
Moisture Content (%)	6.6*	18*	4.5	26	12.4
Maximum Dry Density (Mg/m^3)	1.80*	3.08*	1.49	2.95	2.07
Degree of Compaction	Target 95% [minimum 90%] (Maximum Dry Density)		89	120	98.24
CBR Tests	Target 5%, Minimum 2.5%		3	44	12.28

* Taken from laboratory test results
** Soil Density Gauge (SDG)

831 of the 1073 EDG tests achieved 95% or greater relative compaction, and all but 1 test achieved the minimum 90% or greater relative compaction (with a relative compaction of 89%).

1073 in-situ BS1377-2 moisture content tests were undertaken during the material placement, with a recorded moisture content range of 1.1% to 19.0%.

The equivalent California Bearing Ratio (CBR) values for all 113 tests were in excess of the minimum 2.5% value.

3.2.1 Discussion

The results show that the appropriate compaction has been achieved and that the earthworks have been undertaken in accordance with the Earthworks Specification. The validation information for the earthworks was reviewed and approved as being in accordance with the earthworks specification. More information is available in the Phase 5E1 Geotechnical Validation Report (**Ref. 5**).

4.0 Chemical Validation of Soils

4.1 General

The site-won fill material used and re-engineered to achieve the proposed formation levels was predominantly granular, comprising sandy gravel with variable quantities of clay, silt and cobbles. The gravel was described as comprising slag, brick, quartzite and concrete.

Material was tested in accordance with the RLL Earthworks Specification (**Ref. 3**) and the RLL Remediation Strategy (**Ref. 4**). Chemical data was screened against the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce.

Fill material was sampled prior to placement by RLL and Atkins between May 2018 and October 2022 during the various intrusive investigations undertaken across the Site. Chemical testing was undertaken by Eurofins Chemtest Ltd and ALS Global Ltd.

Clay validation samples were taken from the natural deposits during the mass excavation operation to confirm that the Tidal Flat Deposits had not been impacted by contamination.

Surface validation sampling of the re-engineered formation surface was undertaken by RLL on a 50m grid at 100mm below the formation surface in September 2022. The formation surface validation sample locations and clay validation sample locations are shown on RLL Drawing 18669-RLL-22-XX-DR-O-0326 (**Appendix A**).

4.2 Tidal Flat Deposits

Ten soil samples were collected from the Tidal Flat Deposits whilst they were exposed during the earthworks and sent for contamination testing. Samples were tested for heavy metals, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbon (TPH), BTEX (benzene, toluene, ethylbenzene and xylenes), pH, soil organic matter (SOM), ammoniacal nitrogen, cyanide, phenols and select samples were also tested for asbestos.

The samples were screened against the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce screening criteria in accordance with the Remediation Strategy (**Ref. 4**).

A summary of the laboratory chemical results, screened against relevant assessment criteria, is presented in **Appendix C**. Laboratory certificates are presented in **Appendix D**.

Table 4.1 summarises the exceedances of the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce criteria.

Table 4.1 Summary of exceedances of S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce			
Contaminant	**No. of samples exceeding**	**S4UL Residential with plant uptake value (mg/kg)**	**Exceedances Concentration Range (mg/kg)**
Dibenz(a,h)anthracene	1 of 10	0.24	0.67

One exceedance of the screening criteria was recorded for dibenz(a,h)anthracene, the sample was obtained during the earthworks operation and it is considered the Engineer may have picked up some of the overlying Made Ground in the sample. The natural deposits are not considered to have been impacted by the overlying Made Ground on the site (this has also been confirmed on the wider development) and it is considered an anomalous result.

Six samples submitted for laboratory analysis were screened for asbestos identification. No samples returned positive results.

4.3 Fill Material

A combined volume of approximately 175,000m^3 of Made Ground was engineered into Phase 5E1. In accordance with the Remediation Strategy, a total of 405 soil samples were collected between May 2018 and October 2022 for contamination testing, taken from material allocated to be used in 5E1 as fill material. Fill material was sourced from Phase 5E1 and the wider Glan Llyn site, comprising in-situ or stockpiled site won Made Ground.

Samples were tested for heavy metals, polycyclic aromatic hydrocarbons (PAHs), speciated petroleum hydrocarbons (TPHs), BTEX, pH, soil organic matter (SOM), ammoniacal nitrogen, cyanide, phenols and select samples were also tested for asbestos. The provenance of material is tracked by the sample name.

The samples were screened against the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce in accordance with the Remediation Strategy (**Ref. 4**). A summary of all laboratory chemical results is presented in **Appendix C**. Laboratory certificates are presented in **Appendix D**.

Table 4.2 summarises the exceedances of the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce criteria.

Table 4.2 Summary of exceedances of S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce for the Fill Material.			
Contaminant	**No. of samples exceeding (percentage of samples that exceeded)**	**Selected Screening Value (mg/kg)**	**Exceedances Concentration Range (mg/kg)**
Arsenic	12 of 405 (2.96%)	37	41.00 – 125.00

Table 4.2 Summary of exceedances of S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce for the Fill Material.			
Contaminant	**No. of samples exceeding (percentage of samples that exceeded)**	**Selected Screening Value (mg/kg)**	**Exceedances Concentration Range (mg/kg)**
Chromium	5 of 405 (1.23%)	910	936 - 1200
Mercury	23 of 405 (5.68%)	1.20	1.30 – 14.00
Nickel	4 of 405 (0.99%)	130.00	150.00 – 496.00
Lead	32 of 405 (7.90%)	200.00	202.00 – 2280.00
Vanadium	82 of 405 (20.25%)	410.00	414.00 – 2880.00
Zinc	1 of 405 (0.25%)	3700.00	5280.00
Aromatic TPH >C12-C16	2 of 405 (0.49%)	140.00	160.00 – 190.00
Aromatic TPH >C16-C21	7 of 405 (1.73%)	260.00	320.00 – 3400.00
Aromatic TPH >C21-C35	7 of 405 (1.73%)	1100.00	1200.00 – 4500.00
Aromatic TPH >C35-C44	1 of 405 (0.25%)	1100.00	1580.00
Benzene	129 of 407 (31.85%)	0.087	0.16 – 0.24
Naphthalene	16 of 405 (3.95%)	15.00	16.00 – 39.00
Phenanthrene	2 of 405 (0.49%)	95.00	226.00 – 275.00
Fluoranthene	1 of 405 (0.25%)	280.00	331.00
Benzo(a)anthracene	53 of 405 (13.09%)	7.20	7.30 – 109.00

Table 4.2 Summary of exceedances of S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce for the Fill Material.			
Contaminant	**No. of samples exceeding (percentage of samples that exceeded)**	**Selected Screening Value (mg/kg)**	**Exceedances Concentration Range (mg/kg)**
Chrysene	14 of 405 (3.46%)	15.00	16.00 – 84.6
Benzo[b]fluoranthene	150 of 405 (37.04%)	2.60	2.62 – 121.00
Benzo(a)pyrene	130 of 405 (32.10%)	2.20	2.28 – 71.90
Indeno(1,2,3-c,d)Pyrene	6 of 405 (1.48%)	27.00	29.00 – 56.70
Dibenz(a,h)Anthracene	162 of 405 (40.00%)	0.24	0.25 – 12.00

130 of 405 samples were shown to exceed the screening criteria for benzene. It should be noted that only two samples had concentrations above the limit of detection for benzene. The detection limit for 128 of the 405 samples tested for benzene was listed by the laboratory as 180µg/kg (0.180mg/kg) or 1800µg/kg (1.800mg/kg), this is greater than the screening value of 87µg/kg (0.087mg/kg) and causes a significant skew in the results. Where samples are reported at the detection limit, for screening purposes, it has been conservatively assumed that the value is 180µg/kg or 1800µg/kg. The true concentration is likely to be significantly lower than this value.

Asbestos was identified within 13 of the 294 analysed, these samples were then quantified. Results are summarised in table 4.3.

Tale 4.3 Summary of Asbestos Contamination encountered in the Fill Material.		
Location	**Asbestos Type**	**Quantification (%w/w)**
AL21-1	ACM debris	0.020
AP21-2	Chrysotile (White) Asbestos	0.007
AQ30-1	Chrysotile (White) Asbestos	<0.001
W204-3	Amosite (Brown) Asbestos	0.016
W206-1	Amosite (Brown) Asbestos	<0.001
W209-5	Chrysotile (White) Asbestos	<0.001
W209C-3	Chrysotile (White) Asbestos	<0.001
AI30-2	Chrysotile (White) Asbestos	0.0018

Tale 4.3 Summary of Asbestos Contamination encountered in the Fill Material.		
Location	**Asbestos Type**	**Quantification (%w/w)**
S19-2	Chrysotile (White) Asbestos	<0.001
R160-1	Chrysotile (White) Asbestos	0.006
T19-1	Chrysotile (White) Asbestos	0.0159
TP3BE6	Chrysotile (White) Asbestos	<0.001
TP3BF2	Chrysotile (White) Asbestos	<0.001

The Institute of Occupational Medicine (IOM) risk assessment report for the reuse of soils containing asbestos at Llanwern (**Ref. 6**) states that Made Ground is suitable for reuse in residential areas if concentrations are less than 0.02% (200PPM) and 600mm of clean cover (soils with asbestos content <0.001%) is provided. The Made Ground material will be a minimum of 600mm below finished levels.

4.4 Formation Surface

Following consultation with the Senior Scientific Officer at Newport City Council (NCC) additional chemical sampling of formation surface was proposed as an addendum to the Remediation Strategy (**Ref 7**). The additional sampling was undertaken in accordance with the Remediation Strategy and, in addition to the pre-remediation testing, validation samples were collected to assess the contamination status of the formation surface.

A total of 30 chemical samples were taken, following the earthworks, to assess the contamination status of the formation surface. The validation testing of the formation surface (~750mm below final ground level) was assessed against S4UL Generic Assessment Criteria for Residential End Use with Homegrown Produce screening values in accordance with the Remediation Strategy. Samples were tested for heavy metals, polycyclic aromatic hydrocarbons (PAHs), speciated petroleum hydrocarbons (TPHs), BTEX, pH, soil organic matter (SOM), ammoniacal nitrogen, cyanide, phenols and half of the samples were also tested for asbestos. A summary of the laboratory chemical results is presented in **Appendix C**. Laboratory certificates are presented in **Appendix D**.

The locations of the surface validation samples are shown on RLL Drawing reference 18669-RLL-22-XX-DR-O-0326-P01, in **Appendix A**.

The samples were screened against the S4UL Generic Assessment Criteria for Residential End Use with Homegrown Produce in accordance with the Remediation Strategy (**Ref. 4**). The following table summarises the exceedances:

Table 4.3 Summary of exceedances of the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce for the Surface Validation Samples (750mm Below Final Ground Level)			
Contaminant	**No. of samples exceeding**	**Selected Screening Value (mg/kg)**	**Exceedances Concentration Range (mg/kg)**
Benzo(b)Fluoranthene	19 of 30 (63.33%)	2.60	2.80 – 8.40
Benzo(a)Pyrene	17 of 30 (56.77%)	2.20	2.30 – 6.40
Dibenz(a,h)Anthracene	18 of 30 (60.00%)	0.24	0.25 – 0.93

The formation surface material is 750mm below final ground levels to facilitate the provision of clean cover and appropriate construction material. As such, the pathway between the limited residual exceedances in the Made Ground and the site end-use receptors will be broken with the addition of the imported clean cover in accordance with the Remediation Strategy.

All of the 30 samples submitted for laboratory analysis were screened for asbestos identification. One sample (5E1-SV2 at 0.20m) returned a positive result of 0.044% w/w chrysotile, this is above the IOM screening criteria. In this location a 15m x 15m grid was trimmed to the base of the layer placed (300mm) and the material removed from the site. Following removal four samples were obtained in the trimmed area surrounding the original sample location, and no further positive asbestos results were recorded. Locally sourced suitable material was then replaced.

The locations of recorded exceedances in surface validation samples are presented on RLL Drawing 18669-RLL-23-XX-DR-O-0422-P02, in **Appendix A**.

4.5 Soils Contamination Summary

One exceedance of Dibenz(a,h)anthracene was recorded in the underlying Tidal Flat Deposits.

Exceedances of arsenic, chromium, mercury, nickel, lead, vanadium, Aromatic TPH >C12-C16, Aromatic TPH >C16-C21, Aromatic TPH >C21-C35, benzene, naphthalene, phenanthrene, fluoranthene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[a]pyrene and Dibenz(a,h)Anthracene were encountered in some samples taken from the fill material when compared to the S4UL Generic Assessment Criteria Residential End Use with Homegrown Produce.

Due to the recorded exceedances to the S4UL generic assessment criteria, a clean cover system will be required to break the pathway to any potential contaminants.

Asbestos was identified within 14 of the 324 fill material soil samples tested, at concentration of between <0.001% and 0.044%. One sample detected asbestos

within the formation surface samples above the IOM criteria and as a result was removed, with the underlying material re-sampled. The retained material has concentrations of less than 0.02% (200PPM), the material is considered suitable for reuse in residential areas beneath suitable inert clean cover, in accordance with the IOM risk assessment report (**Ref. 6**).

An assessment on the risk to controlled waters will be validated in a separate validation report in accordance with the Hannah Fraser consulting Soils Verification methodology (**Ref. 8**).

5.0 Ground Gas Assessment

5.1 Gas Monitoring

Gas monitoring was undertaken in six monitoring wells (5E1-WS1, 5E1-WS3, and 5E1-WS5 to 5E1-WS8) between September 2022 and October 2023 by RLL. The locations of the monitoring wells are shown on RLL drawing 18669-RLL-22-XX-DR-O-0326-C (**Appendix A**), and the monitoring results are available in **Appendix E**.

Eleven rounds of ground gas monitoring have been undertaken at locations installed between September 2022 and October 2023. A maximum concentration of methane of 4.6% was recorded, and a maximum concentration of 0.2% for carbon dioxide was recorded. Low oxygen concentrations (minimum of 0.1%) were occasionally encountered in boreholes during the monitoring period.

Low oxygen concentrations are often indicative of the presence of other gasses, or anaerobic soil conditions due to water saturated ground. Anaerobic soil conditions were likely encountered during the time of monitoring due to the thickness of engineered fill and the presence of partially flooded monitoring positions during the gas monitoring rounds.

A summary of the gas monitoring is presented in Table 5.1.

Table 5.1 Gas Monitoring Results Summary

Hole ID	Barometric Pressure Range (mb)	Peak Methane (%)	Peak Carbon Dioxide (%)	Min Oxygen (%)	Maximum Flow Rate (l/hr)
5E1-WS1	990 - 1021	0.50	0.10	0.20	0.30*
5E1-WS3	990 - 1021	0.80	0.20	0.50	0.30*
5E1-WS5	989 - 1021	0.60	0.10	0.20	0.30*
5E1-WS6	990 - 1021	3.50	0.10	0.10	0.30*
5E1-WS7	989 - 1020	4.60	0.10	0.10	0.30*
5E1-WS8	990 - 1021	0.50	0.10	0.30	0.30*

**0.3 l/hr flow has been used on any value less than 0.3 l/hr, based on the gas analyser margin of error

GSVs were calculated for each monitoring borehole and are initially conservatively based on the peak methane and carbon dioxide readings and the maximum flow rate encountered within each exploratory hole.

Table 5.2 Gas Screening Values						
Hole ID	**Max. CO_2 conc. (%)***	**Max. CH_4 conc. (%)***	**Maximum Flow Rate (l/hr)****	**CO_2 GSV**	**CH_4 GSV**	**Borehole Characterisation**
5E1-WS1	0.1	0.5	0.3*	0.0003	0.0015	CS1
5E1-WS3	0.2	0.8	0.3*	0.0006	0.0024	CS1
5E1-WS5	0.1	0.6	0.3*	0.0003	0.0018	CS1
5E1-WS6	0.1	3.5	0.3*	0.0003	0.0105	CS2
5E1-WS7	0.1	4.6	0.3*	0.0003	0.0138	CS2
5E1-WS8	0.1	0.5	0.3*	0.0003	0.0015	CS1

*0.1% concentration value has been used on any value less than 0.1%, based on the gas analyser margin of error.
**0.3 l/hr flow has been used on any value less than 0.3 l/hr, based on the gas analyser margin of error.

In accordance with BS 8485_2015+A1-2019 and based on the gas monitoring completed to date, the majority of Phase 5E1 would fall within Characteristic Situation 1 (CS1) classification. Positions 5E1-WS06 and 5E1-WS07 would fall under Characteristic Situation 2 (CS2) classification due to elevated peak methane concentrations of 3.50% and 4.60% respectively.

5.2 Proposed Gas Protection

In accordance with BS8485+A1:2019, a classification of CS2 would require a score of 3.5 based on the units being preliminary classed as Type A structures.

For all areas (Type A) we propose the following:

Item	Feature	Score
1	Passive sub floor dispersal layer of very good performance.	2.5
2	Independently inspected and validated gas resistant membrane.	2.0
	Total Score	**4.5**

The above proposed design meets the required scored for Type A structures for CS2 gas protection. Based on the available information, the protection suggested in the table is considered suitably protective of the proposed commercial building.

5.3 Radon

Information presented on the Public Health England 'UK Maps of Radon' website indicates that the Site is within a radon affected area, with 1-3% of properties being above the Action Level. As such, the site is in a radon effected area but no radon protection measures are likely to be required in the construction of the new development.

It is noted that CS2 gas protection measures have been recommended which will include the installation of an independently verified gas membrane.

6.0 Permeability Assessment

6.1.1 Introduction

The Glan Llyn Soils Validation Strategy for Protection of Controlled Waters (**Ref. 8**) assumes a hydraulic conductivity of 1 x 10-6 m/s or less for the engineered fill and also presents a rationale for the assessment of permeability.

It is proposed that the hydraulic conductivity of the fill is validated by taking at least three hydraulic conductivity measurements per phase, with a guide density of one test per 6.25 ha.

An assessment on the risk to controlled waters will be validated in a separate Controlled Waters Validation Report, but the following sections provide supporting infiltration testing using falling head tests, rising head tests and formation falling head tests.

6.1.2 Formation Falling Head Tests

Formation falling head tests were undertaken at nine locations in in August 2023 (5E1-INF-1 to 5E1-INF-9).

A 270mm diameter and 500mm high metal pipe was keyed in the ground approximately 25mm, a second 100mm pipe was keyed into the Made Ground within the larger pipe. The outside circumference of both pipes was sealed with natural clay and the pipes covered with a plastic sheet.

The purpose of the second pipe is to reduce surface wetting and horizontal movement of water, the plastic sheet was placed to reduce evaporation and rainfall interfering with the test.

Both pipes were filled with 120mm to 235mm of clean water and measurements were taken to the top of water from the top of the inner pipe to measure the permeability of the underlying soils. The test is non-standard but is intended to be consistently repeatable to provide site specific data as a line of evidence to support the assumption that reengineering the near surface Made Ground has reduced the permeability.

Formation falling head tests were conducted for a minimum of 585 minutes, at the end of the testing period it was found that infiltration rates (measured in increments) had substantially stabilised and the calculated rate is considered more representative of the ground conditions.

The location of the falling head tests are shown on RLL drawing 18669-RLL-22-XX-DR-O-0326-P02 (**Appendix A**), and the raw data is available in **Appendix F**.

Table 6.1 Falling Head Test Results Summary					
Test ID	**Initial Water Level (mm)**	**Duration of Test (mins)**	**Final Water Level (mm)**	**Total Fall in Water Level (mm)**	**Permeability (m/s)**
5e1-INF-1	235	1510	149	86	9.49E-07
5e1-INF-2	212	1416	130	82	9.65E-07
5e1-INF-3	120	585	90	30	8.54E-07
5e1-INF-4	172	856	121	51	9.93E-07
5e1-INF-5	215	1335	140	75	9.36E-07
5e1-INF-6	177	1235	107	65	8.77E07
5e1-INF-7	139	1302	69	70	8.96E-07
5e1-INF-8	154	1296	89	65	8.36E-07
5e1-INF-9	130	1292	92	37	4.77E-07

The falling head tests indicated the permeability of the underlying soils to be very low, with an range of 9.93E-07m/s to 4.77E-07Em/s.

Based on the falling head test results the ground is considered to have poor drainage characteristics consistent with the modelling and in accordance with the remediation strategy.

6.2 Falling Head Tests

Falling head tests were undertaken on four occasions within 4E1 at boreholes 5E1-WS03, 5E1-WS06 and 5E1-WS07in July 2025. Boreholes, installed within the Made Ground, were filled to near surface level with clean water and intermittently measured as water returned to equilibrium levels. Tests were conducted for a minimum of 180 minutes.

The location of the falling head tests are shown on RLL Drawing 18669-RLL-25-XX-DR-O-0778-P01 (**Appendix A**).

Table 6.2 – Falling Head Test Results Summary			
Test ID	**Duration of Test (mins)**	**Total Fall in Water Level (mm)**	**Permeability (m/s)**
5E1-WS03	251	1	$7.22E^{-08}$
4G-WS03	180	2	$3.83E^{-07}$
4G-WS05	180	10	$9.80E^{-07}$

The falling head tests indicated the permeability of the underlying soils to be very low, with a range of 7.22E-08m/s to 9.80E-07Em/s.

Based on the formation falling head test results the ground is considered to have poor drainage characteristics consistent with the modelling discussed within the Soils Validation Strategy for Protection of Controlled Waters (**Ref. 8**).

6.3 Rising Head Tests

In addition to the falling head tests conducted on the formation surface, five rising head tests were conducted on boreholes on the Site (5E1-WS03, 5E1-WS05, 5E1-WS06, 5E1-WS07 and 5E1-WS08). One test was conducted in each location.

The rising head tests were designed and undertaken to broadly align with BS EN ISO 22282-2-2012. In advance of undertaking the tests, the boreholes were assessed as to whether they were suitable for undertaking a rising head test and an initial water level was measured. The wells were then purged until dry. Selected locations were then monitored as water levels returned towards equilibrium following an 'instantaneous' rise in head.

A summary of the results is presented in the table below:

Table 6.3 – Rising Head Test Results Summary

Test ID	Initial Water Level (mm)	Duration of Test (mins)	Final Water Level (m)	Measured Rise in Water Level (mm)	Permeability (m/s)
5E1WS03	0.994	230	0.992	2	-1.45 E^{-07}
5E1WS05	1.973	60	1.971	2	-5.56 E^{-07}
5E1WS06	2.406	75	2.402	4	-8.89 E^{-07}
5E1WS07	2.196	153	2.188	8	-8.71E^{-07}
5E1WS03	2.035	510	2.006	29	-9.48E^{-07}

The rising head tests indicated the permeability of the underlying soils to be very low, with a range of 1.45E-08m/s to 9.48E-07Em/s.

Based on the rising head and formation falling head test results the re-engineered Made Ground is considered to have poor drainage characteristics consistent with the modelling discussed within the Soils Validation Strategy for Protection of Controlled Waters (**Ref. 8**).

7.0 Conclusions

During previous intrusive ground investigations on Phase 5E1, the Made Ground was found to contain exceedances of cyanide, heavy metals and PAHs; as well as numerous buried obstructions. As such, remediation and earthworks were required to provide a suitable site for development.

The remediation works were undertaken by McCarthy Contractors (Bridgend) Ltd between April 2022 and September 2022. The works comprised site clearance, removal of obstructions, removal of unsuitable material, excavation and turnover of the suitable for reuse Made Ground to the underlying Tidal Flat Deposits and re-engineering to a formation level of 750mm below the proposed final ground level to facilitate the provision of clean cover requirements.

During the removal of the Made Ground, numerous buried obstructions were encountered including piles and fused slag. The buried obstructions were removed in their entirety, or in the case of the deep piles, cropped to the top of the underlying Tidal Flat Deposits. Following the 25m grid sampling exercise an approximate total of 115,000m^3 of Made Ground was assessed as suitable for reuse following turnover and placement. Approximately 60,000m^3 of pre validated stockpiled site won material was utilised to achieve the formation level.

Throughout the removal and re-engineering of the Made Ground, the Site was assessed by an RLL engineer for visual and olfactory evidence of contamination. Validation of the remedial earthworks relevant to Phase 5E1 comprised validation soil sampling, permeability testing, and gas monitoring. The fill material used to re-engineer Phase 5E1 was predominantly granular, comprising sandy gravel with variable quantities of clay, silt and cobbles.

The engineered Made Ground within the phase is considered to have poor drainage characteristics (1 x 10-6 m/s or less), based on the falling head and formation falling head test results, and is consistent with the modelling and in accordance with the hydraulic conductivity assumptions made within the CWDQRA report and the Soils Validation Strategy for Protection of Controlled Waters.

Ten soil samples were collected from the Tidal Flat Deposits exposed during the earthworks and sent for contamination testing. One exceedance of the criteria was recorded for dibenz(a,h)Anthracene.

Exceedances of arsenic, chromium, mercury, nickel, lead, vanadium, zinc, aromatic TPH >C12-C16, aromatic TPH >C16-C21, aromatic TPH >C21-C35, aromatic TPH >C35-C44, benzene, naphthalene, phenanthrene, fluoranthene, benzo(b)anthracene, chrysene, benzo[b]fluoranthene, benzo(a)pyrene, ideno(1,2,3-c,d)pyrene and dibenz(a,h)Anthracene were encountered in a limited number of samples taken from the fill material samples when compared to the S4UL generic assessment criteria for residential end-use with homegrown produce screening values.

Asbestos was identified within 14 of the 324 fill material soil samples tested, at concentrations of between <0.001% and 0.044%. The only exceedance has been removed from the site and the location resampled. The retained material has

concentrations of less than 0.02% (200PPM), the material is considered suitable for reuse in residential areas beneath suitable inert clean cover, in accordance with the IOM risk assessment report as no viable pathway will be present.

It is considered that a suitable clean cover system of 600mm placed above the Made Ground will be sufficient in breaking the pathway between source and end users of the Site.

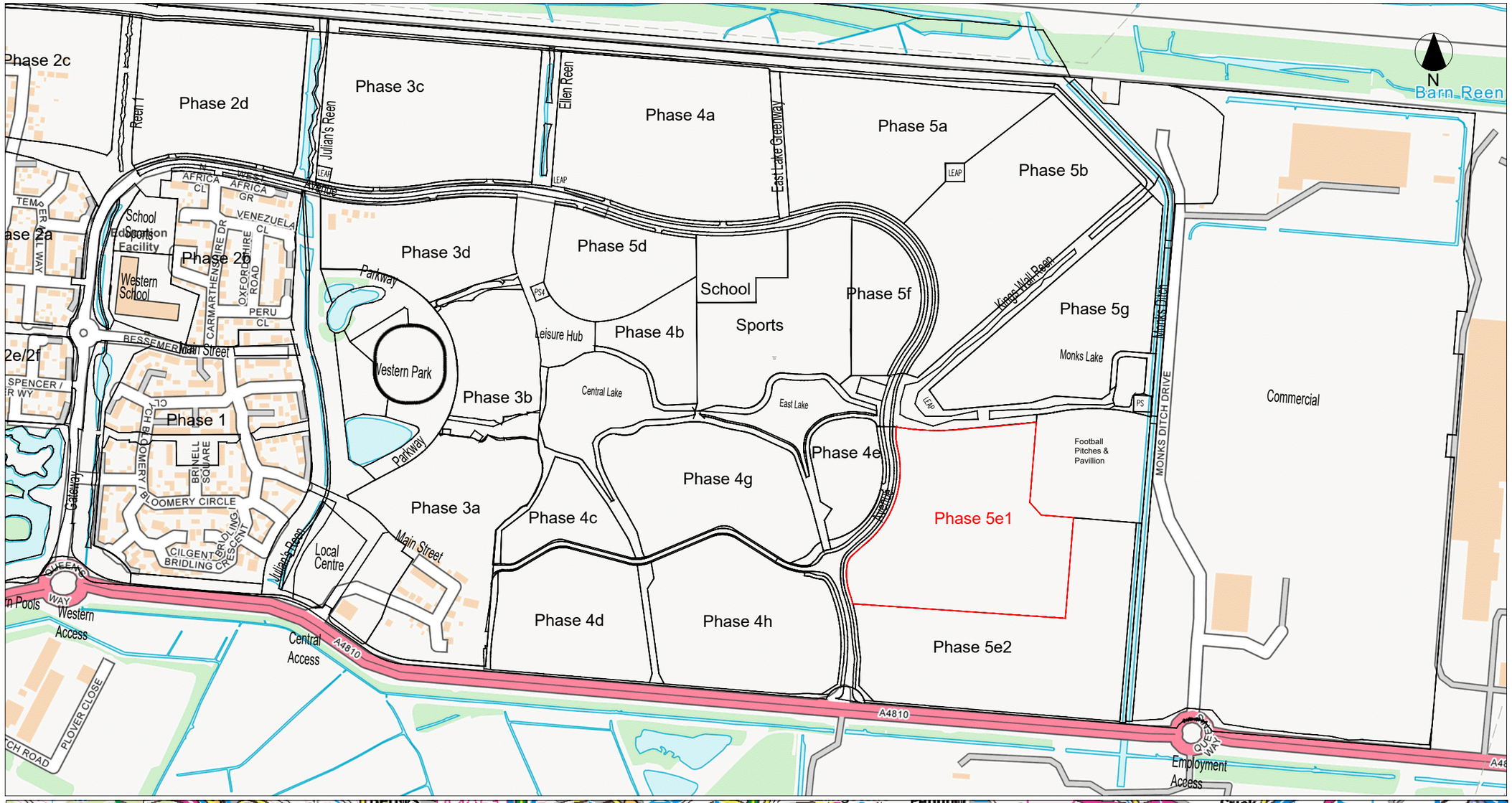
In accordance with BS 8485_2015+A1-2019, based on the completed gas monitoring, Phase 5E1 would fall under Characteristic Situation 2 (CS2) classification. The Site is located within an area where less than 1-3% of properties being above the Action Level. As such, the site is in a radon effected area but no radon protection measures are likely to be required in the construction of the new development.

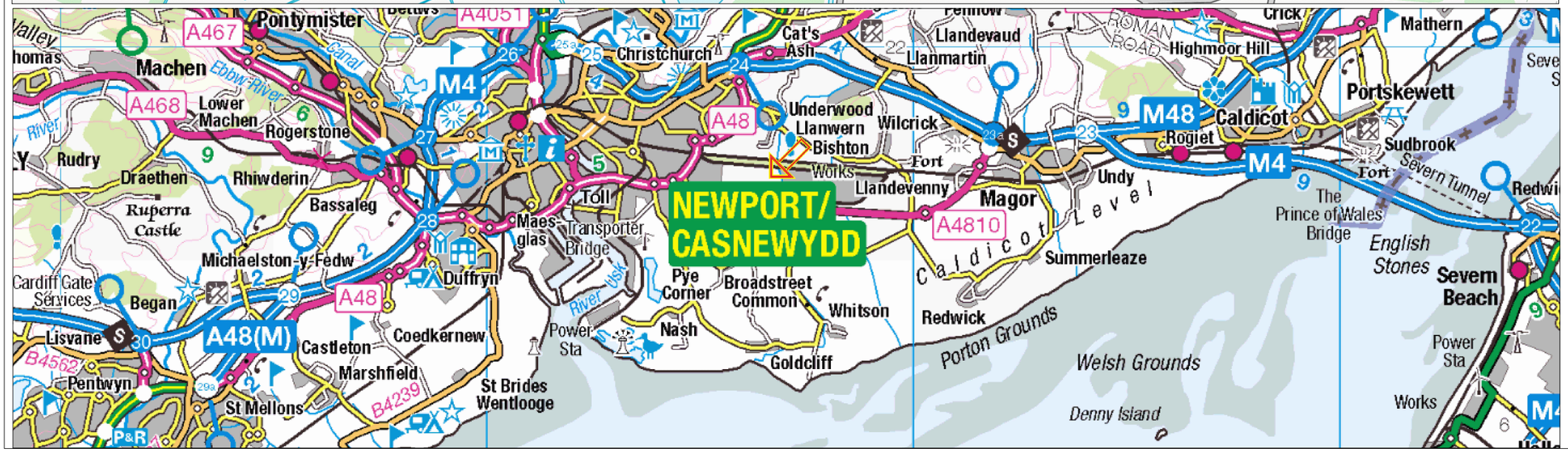
An assessment on the risk to controlled waters will be validated in a separate Controlled Waters Validation Report in accordance with the Hannah Fraser consulting Soils Verification Methodology.

The removal of contaminated material, the excavation to natural clay and the re-engineering of the Site has removed potential sources of contamination and has reduced the permeability of the Made Ground. Made Ground assessed to be suitable for reuse beneath the clean cover (when compared with criteria presented in the RLL Remediation Strategy) was re-engineered and compacted in accordance with the RLL Earthworks Specification. The Site has been re-engineered to be 750mm below final formation levels to facilitate the provision of clean cover across the Site. The pathway between the residual exceedances in the Made Ground and the site end-users will be broken with the provision of the imported clean cover, in accordance with the RLL Remediation Strategy.

Based on the site monitoring and validation information RLL consider that the remediation works at the Phase 5E1 Site have been undertaken in accordance with the requirements of the Phase 5E1 Remediation Strategy.

Appendix A: Drawings





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KEY:

Approximate Site Boundary

Rev	Date	Amendments	By	Chk
P02	10.05.23	Update	FT	NS
P01	27.10.21	First Draft	SR	CW

Client
St Modwen Developments

Project
P18-669 Llanwern

Drawing Title
Phase5e1
Site Location Plan

INFORMATION

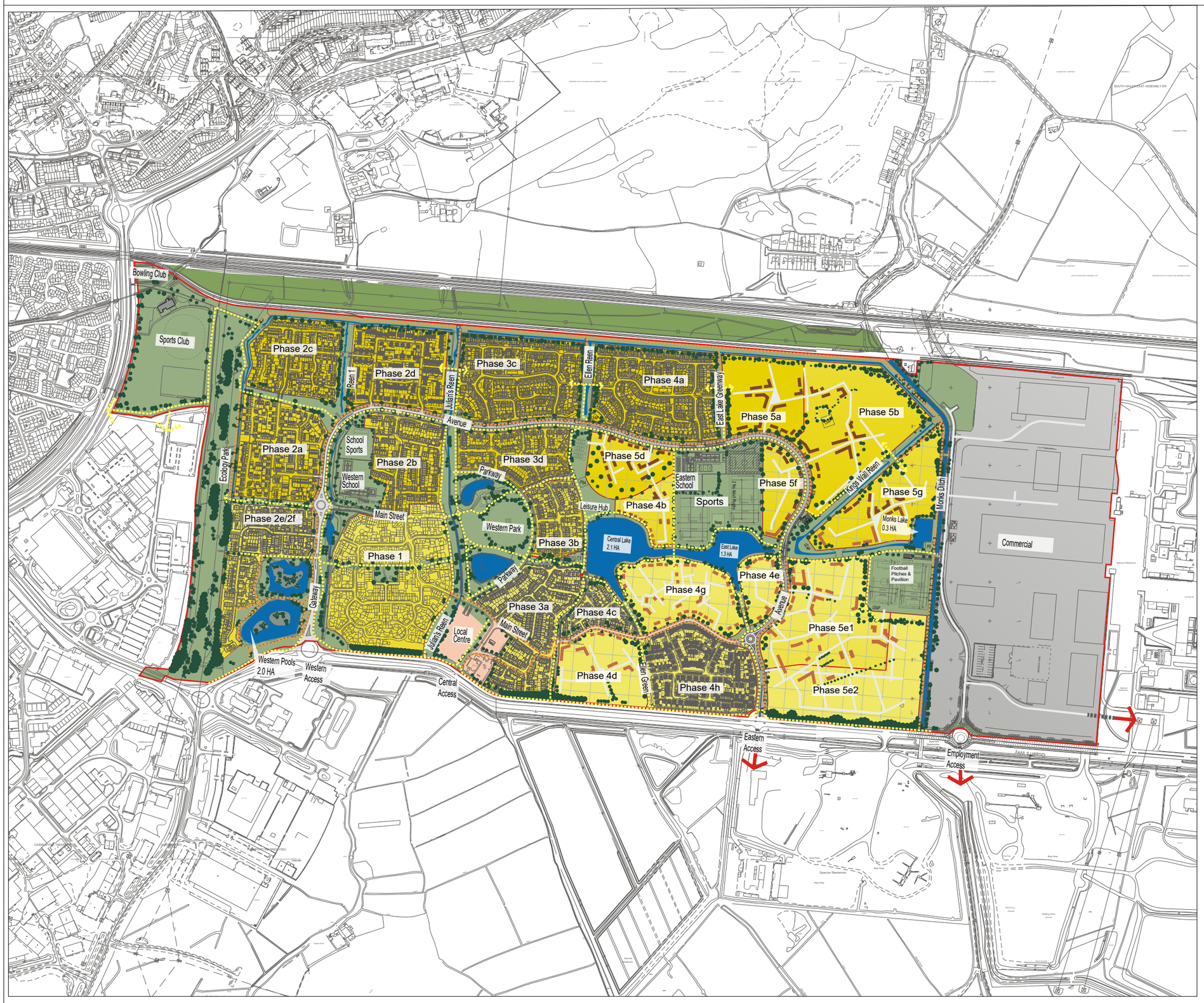
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Drawing No. — Rev.
18669-RLL-21-XX-DR-O-0173_P02

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Glan Llyn -ESAMP Indicative Masterplan



SGP
Architects + Masterplanners

Waterfront House,
2a Smith Way, Grove Park,
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LE19 1SX
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www.stephengeorge.co.uk

SGP File Ref:	8111-08-A011	**Drawing No:**	8111-08-A012
Project No:	8111-08	**Rev:**	**Rev P19**
Drawn By:	NV	**Scale:**	1:5000 @A1
Date:	10/04/2019		

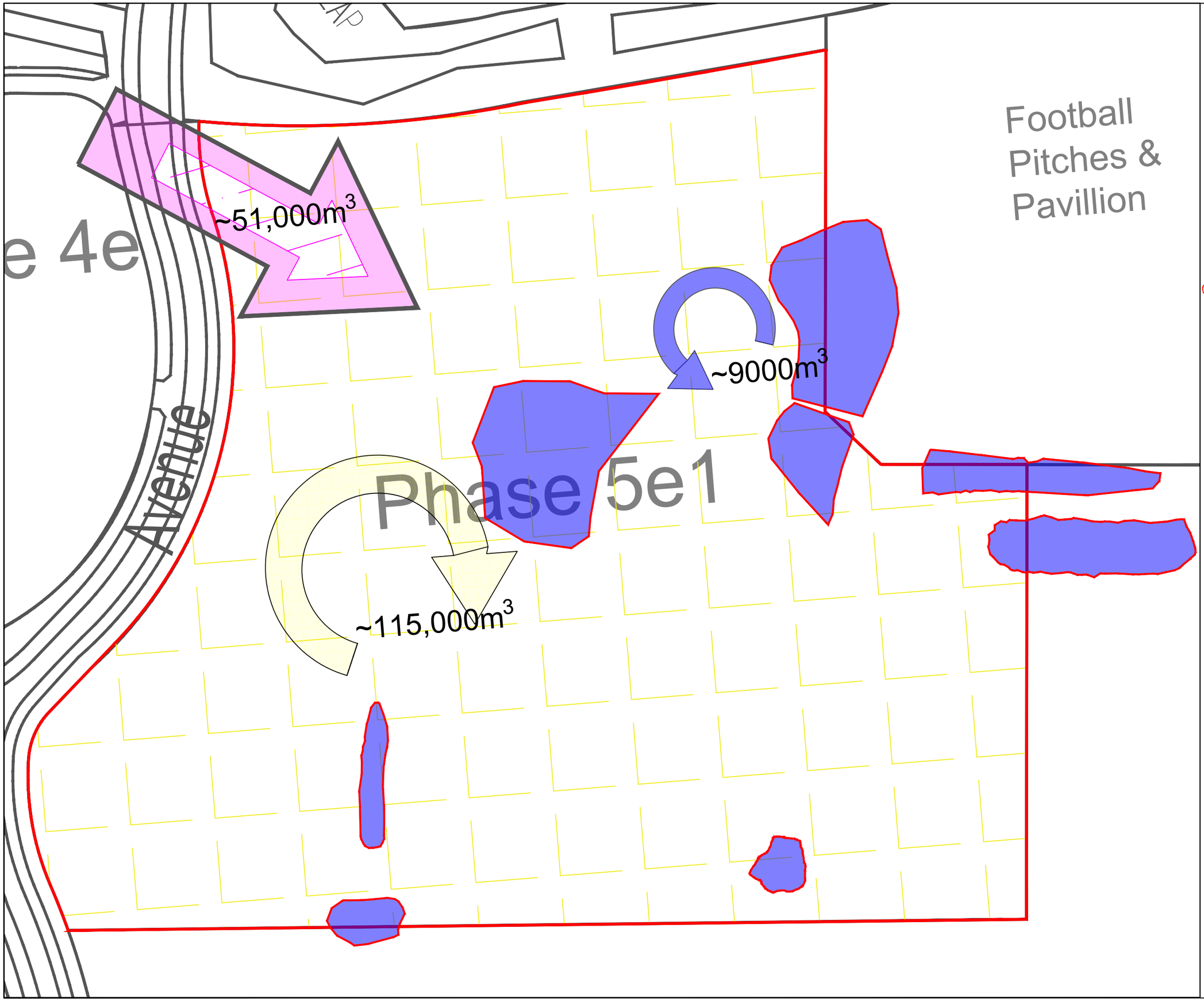
Notes:
Residential areas quoted are approximate gross site areas and include Leaps, Laps and on plot road infrastructure

Notes:
Residential areas quoted are approximate gross site areas and include Leaps, Laps and on plot road infrastructlayture

0 50 100 200 250 300 400 500
Metres at scale 1:5000

ST.MODWEN

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KEY:

- MADE GROUND IMPORT MATERIAL FROM WIDER SITE
- MADE GROUND (STOCKPILES) REUSED WITHIN PHASE 5E1
- PHASE 5E1 SOURCE MATERIAL FROM EXCAVATION
- PHASE 5E1 SITE BOUNDARY

Rev	Date	Amendments	By	Chk
P02	11/09/2025	New format	DM	CW
P01	15/06/2023	First Issue	ET	CW

Client

Revantage Real Estate

Project

P18-669
Llanwern Reclamation

Drawing Title

Phase 5E1

Material Tracking Information

INFORMATION

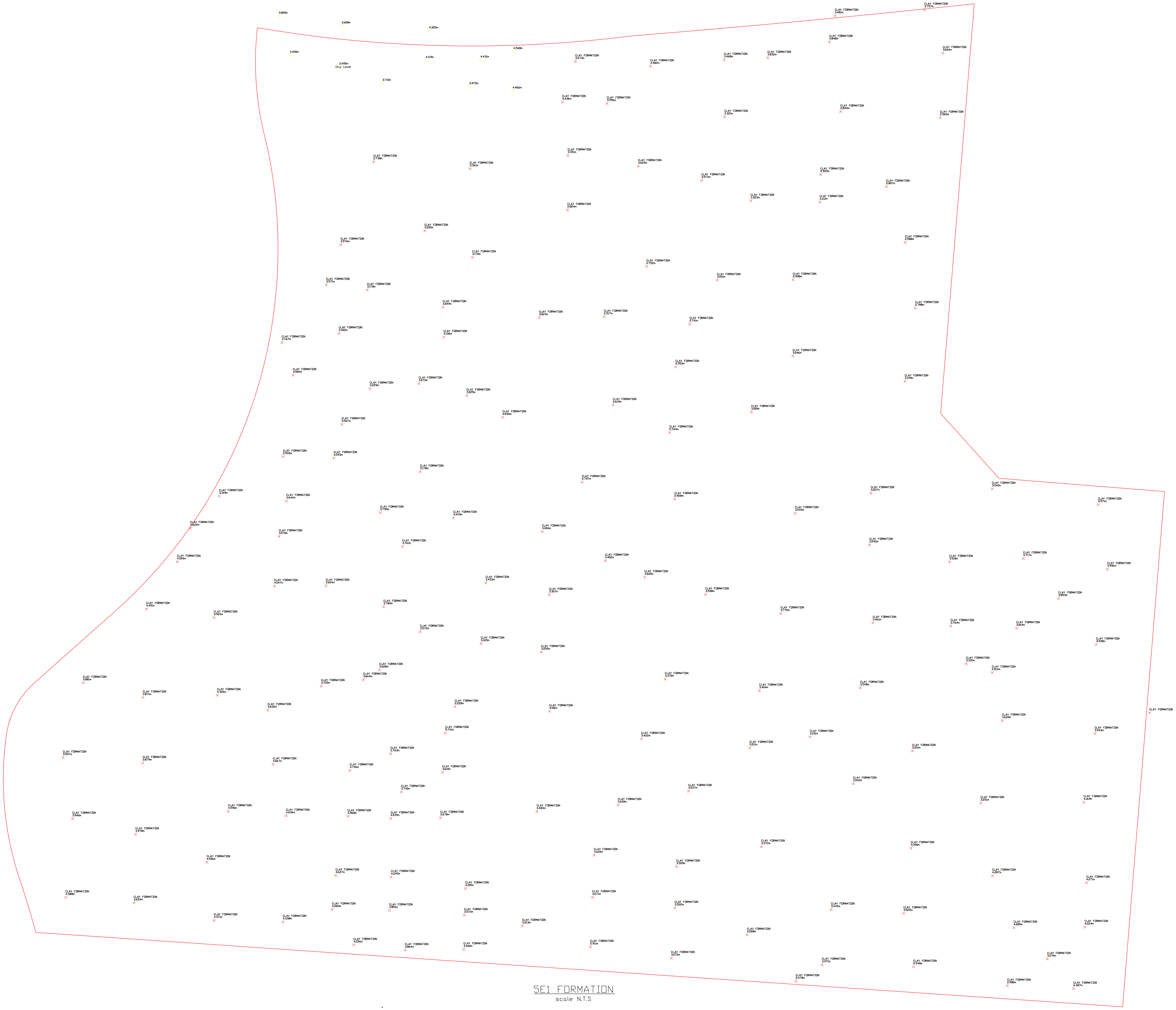
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NTS	DM	CW	30/07/2025

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5E1 FORMATION
scale N.T.S

NOTES

1.

REV.	DESCRIPTION	BY	DATE
A	AS BUILT	MP	22/09/2022

McCarthy Contractors (Bridgend) Ltd

46A Village Farm Industrial Estate
Pyle - CF33 6BP
Tel - (01656) 745838 Fax - (01656) 740596

client: ST MODWENS

project: LLANWERN

drawing title: 5E1 AS BUILT FORMATION

drawn	chkd	scale	date
MP	-	N.T.S @A0	SEPT 2022

As Built ☒ ☐ ☐	Job No.	Drawing No.	Rev.
			A



5E1 OBSTRUCTIONS
scale N.T.S

NOTES

1. Warning the survey details the As Built position of the structures as surveyed at formation level. No guarantee can be given to the position of the structure/obstruction or extents underneath the formation layer.

REV.	DESCRIPTION	BY	DATE
A	AS BUILT	MP	22/09/2022

McCarthy Contractors (Bridgend) Ltd

46A Village Farm Industrial Estate
Pyle - CF33 6BP
Tel - 01656 745838 Fax - 01656 740596

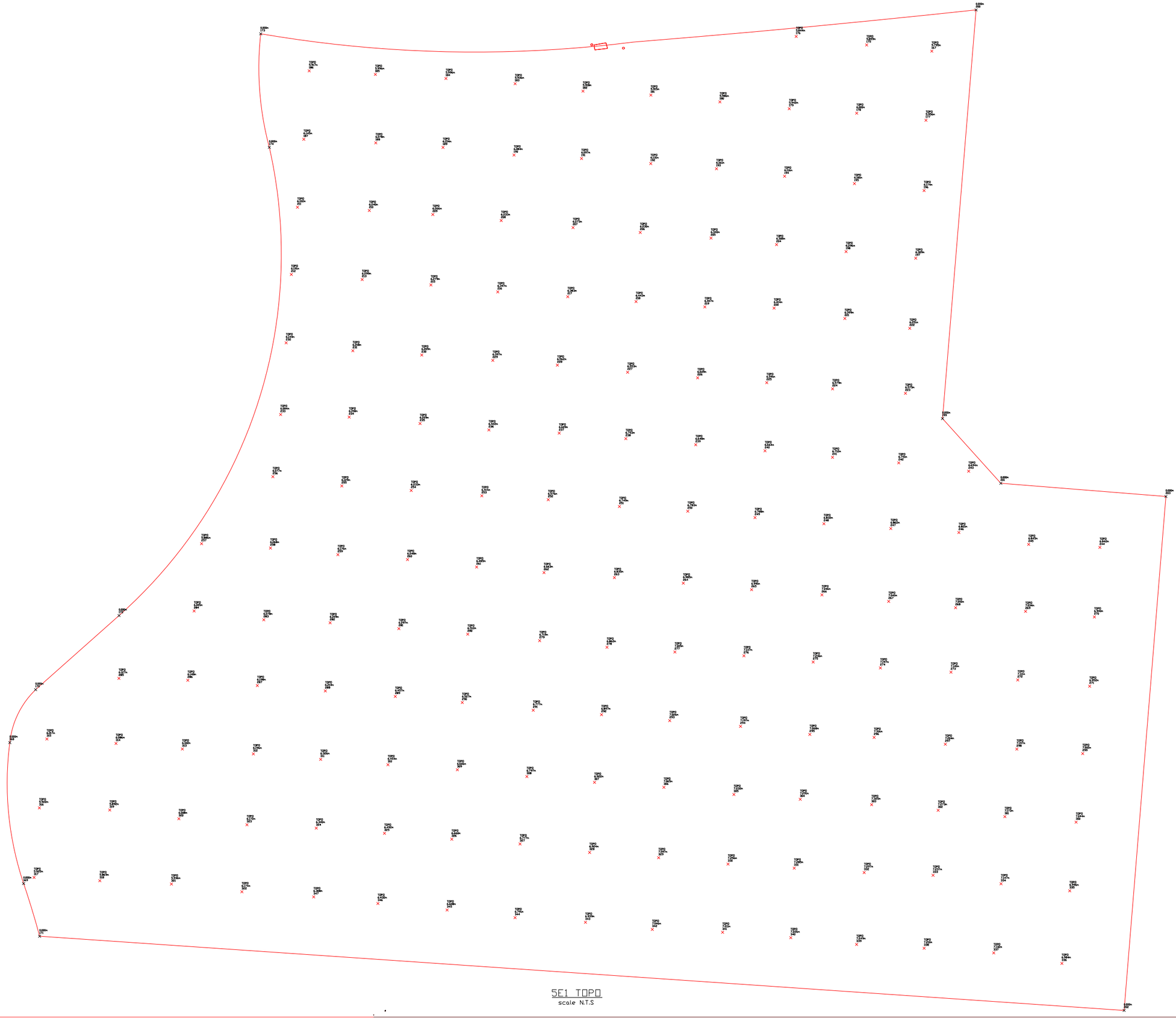
client: ST MODWENS

project: LLANWERN

drawing title: 5E1 AS BUILT STRUCTURES/OBSTRUCTURES

Drawn	Chkd	Scale	Date
MP	-	N.T.S @A0	SEPT 2022

As Built	Job No.	Drawing No.	Rev.
☒			A



5E1 TOPO
scale N.T.S

NOTES

1.

REV.	DESCRIPTION	BY	DATE
A	AS BUILT	MP	21/09/2022

McCarthy Contractors (Bridgend) Ltd

44A Village Farm Industrial Estate
Pyle - CF33 6BP
Tel - 01656674838 Fax - 01656674596

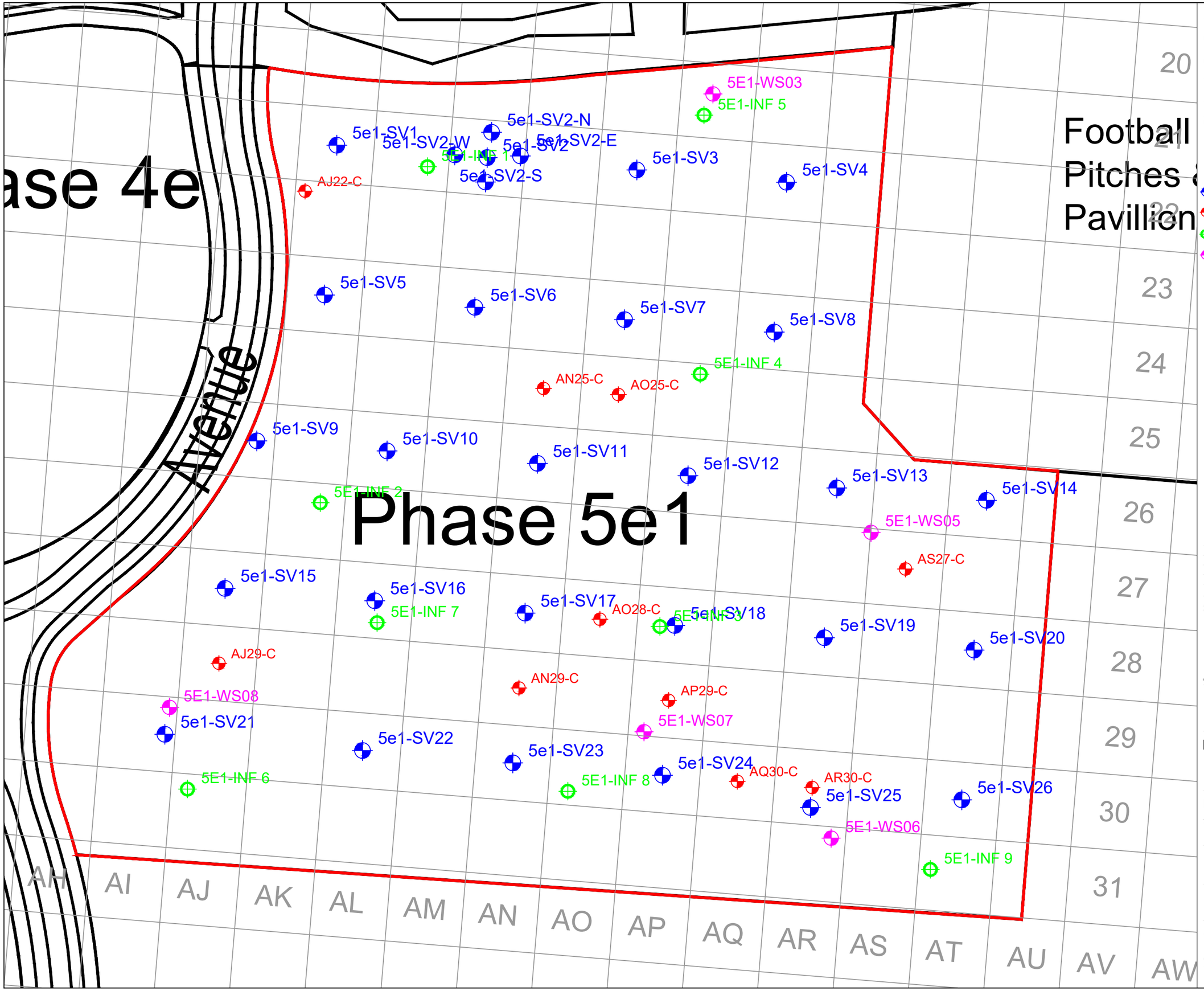
client: ST MODWENS

project: LLANWERN

drawing title: 5E1 AS BUILT TOPOGRAPHICAL SURVEY

Drawn	Chkd	Scale	Date
MP	-	N.T.S @A0	SEPT 2022

As Built	Job No.	Drawing No.	Rev.
☒			A



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KEY:

- 5E1-SV — SURFACE VALIDATION SAMPLE LOCATION
- 5E1-C — CLAY VALIDATION SAMPLE LOCATION
- 5E1-INF 1 — SURFACE INFILTRATION TEST LOCATION
- WS — WINDOW SAMPLE BOREHOLE + FALLING/RISING HEAD TEST LOCATION

Rev	Date	Amendments	By	Chk
B	28/09/2022	Updated surface validation locations	CD	CW

Client

Revantage Real Estate

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E1

Validation Location Plan

INFORMATION

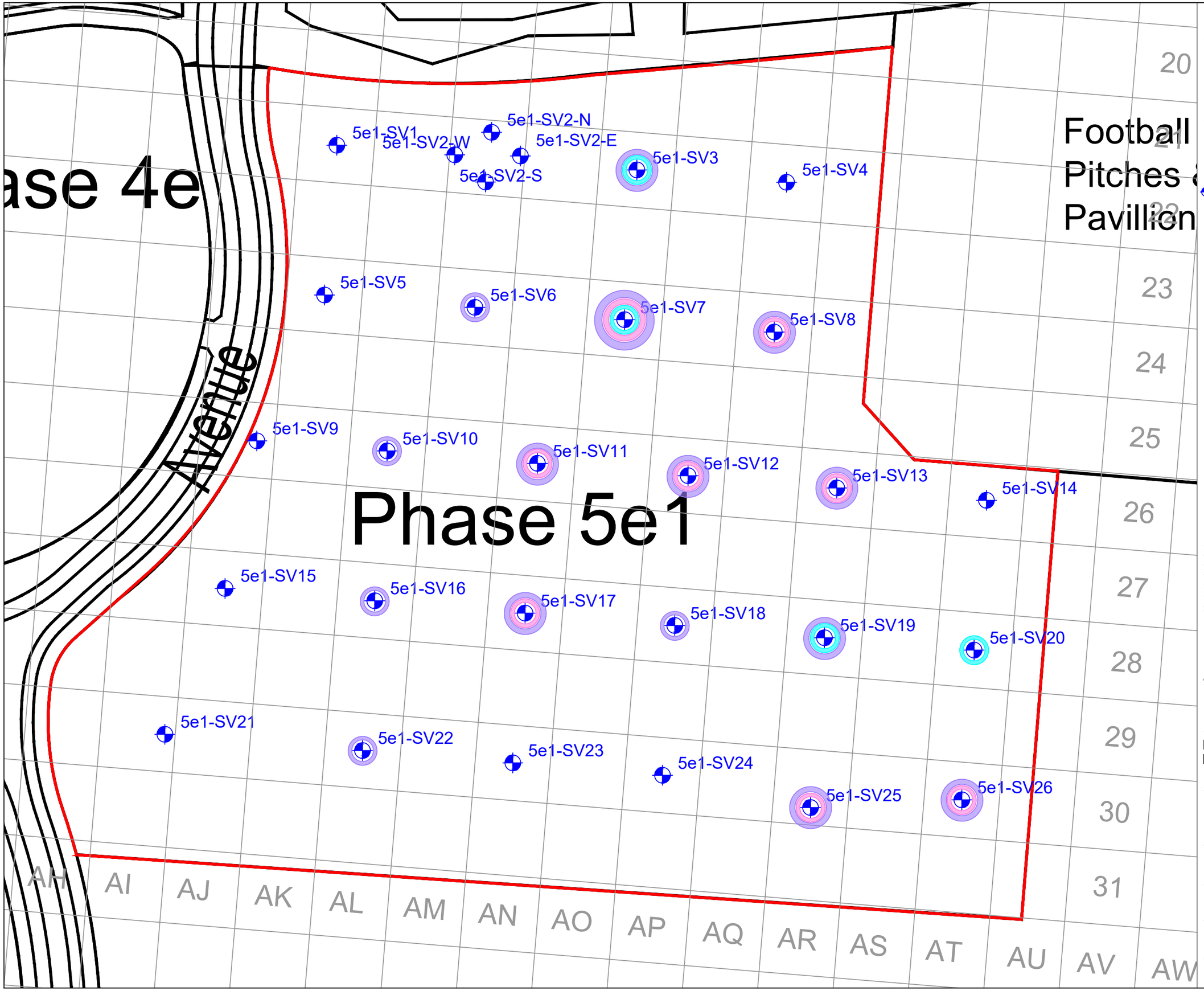
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KEY:

5E1-SV SURFACE VALIDATION SAMPLE LOCATION

BENZO[b]FLUORANTHENE EXCEEDANCE

FLUORANTHENE EXCEEDANCE

CYANIDE EXCEEDANCE

Rev	Date	Amendments	By	Chk
P02	04/08/2025	Updated Positions	AMS	CW
P01	14/06/2023	First Draft	ET	CW

Client

Revantage Real Estate

Project

P18-669 Llanwern Reclamation Phase 5E1

Drawing Title

Surface Validation Exceedance Location Plan

INFORMATION

	Drawn	Checked	Date
NTS	ET	CW	14/06/23

Drawing No. — Rev.

18669-RLL-23-XX-DR-O-0422 P02

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Appendix B: Photographic Report

Phase 5e1 – Llanwern – Photographic Report



Photograph 1 (12/04/22) – A large area in the west of Phase 5e1 shown after excavation to the clay of the Tidal Flat Deposits (TFD). The formerly overlying made ground in this area had been previously excavated in 2021.



Photograph 2 (13/04/21) – Extensive hard ground, encountered as fused slag, has been encountered in Phase 5e1. Much of the works in the Phase have required extensive breakout prior to excavation.



Photograph 3 (20/04/22) – A bulldozer placed suitable material as an initial running layer on the clay in the initial backfill area.



Photograph 4 (26/04/22) – A bulldozer placing material as an engineered backfill. Material has been placed in 300mm layers to achieve suitable compaction and segregate oversize inclusions.



Photograph 5 (04/05/22) – A large concrete culvert (Drain 4) was encountered orientated approximately north-south on the western side of Phase 5e1. This structure has been broken out in its entirety within Phase 5e1 exposing the underlying clay and supporting concrete piles.



Photograph 6 (04/05/21) – Backfill layers have been placed in 300mm thick layers and compacted with a vibrating drum roller. A excavator with a rake attachment was utilised throughout the works to segregate oversize material from the engineered layers.



Photograph 7 (17/05/22) – A large stretch of Drain 4 broken out to the clay level and concrete removed in its entirety. Note the piles encountered at the base of the excavation.



Photograph 8 (17/05/22) – Progress of the earthworks.



Photograph 9 (18/05/22) – Extensive break out on thick layers of hard fused slag..



Photograph 10 (25/05/22) – An additional area in Phase 5e1 after excavation to the to the clay level.



Photograph 11 (07/06/22) – A vibrating drum roller used to compact the backfill fill in layers.



Photograph 12 (17/06/22) – Excavated material is hauled via dump trucks to signed off backfill areas.



Photograph 13 (28/06/22) – Large rebar reinforced concrete footings encountered during excavation and breakout works. These structures were thought to be associated with a former stockhouse on the steelworks.



Photograph 14 (11/07/22) – Two excavators with hammer attachments break out extensive concrete structures .



Photograph 15 (24/08/22) – GPS bulldozer placed a final layer at formation level..



Photograph 16 (15/09/22) – Phase 5e1 backfilled to the specified formation level.

Appendix C: Chemical Screening Summary Tables

Results - Soil

Client: Rodgers Leask Environmental																																		
																																		Stockpile: 3CP1	
					Job No.:		22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
					Sample ID.:	Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444	1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453	1367454	1367455	1367456	1367457	1367458	1367459	1367460	1367461
					Client Sample Ref.:		3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29	3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38	3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45	3CP46
					Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:		04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022
					Asbestos Lab:		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																														
ACM Type	U	2192		N/A			-		-		-		-		-		-		-		-		-		-		-		-		-	
Asbestos Identification	U	2192		N/A			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001																														
Total Asbestos	U	2192	%	0.001																														
Moisture	N	2030	%	0.02			5.10	3.20	5.00	4.50	3.40	4.30	5.70	5.70	5.70	6.10	6.70	5.40	5.30	5.60	6.10	5.10	5.00	6.00	4.60	5.00	5.90	0.82	5.40	2.70	3.70	3.70
Soil Colour	N	2040		N/A			Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown
Other Material	N	2040		N/A			Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A			Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C	M	2010	pH units	4			10.40	10.80	10.70	11.60	11.10	11.70	11.30	10.90	11.10	11.20	10.20	10.50	9.30	10.30	10.50	9.90	11.00	10.10	10.00	10.00	10.70	10.50	10.20	10.60	10.00	9.80
Cyanide (Total)	M	2300	mg/kg	0.5			<0.5	<0.5	<0.5	<0.5	<0.5	0.50	0.90	1.50	0.90	1.00	3.00	<0.5	0.60	0.80	<0.5	<0.5	1.10	1.20	1.20	<0.5	<0.5	1.80	0.80	1.10	0.70	1.00
Ammoniacal Nitrogen	M	2425	mg/kg	0.5			0.71	0.72	1.00	0.78	1.20	0.65	1.90	1.30	2.30	0.73	4.00	1.30	1.20	1.40	2.20	2.60	0.86	0.76	0.78	0.58	3.30	2.40	1.00	0.93	1.60	1.90
Iron (Total)	N	2430	mg/kg	100			240000.00	210000.00	220000.00	200000.00	210000.00	210000.00	190000.00	140000.00	150000.00	180000.00	120000.00	51000.00	270000.00	230000.00	28000.00	31000.00	27000.00	32000.00	33000.00	33000.00	30000.00	32000.00	32000.00	32000.00	34000.00	34000.00
Arsenic	M	2450	mg/kg	1	37		19.00	17.00	19.00	18.00	18.00	19.00	21.00	16.00	19.00	18.00	18.00	22.00	17.00	20.00	19.00	12.00	9.90	17.00	17.00	25.00	24.00	14.00	13.00	12.00	18.00	16.00
Cadmium	M	2450	mg/kg	0.1	26		0.45	0.35	0.50	0.42	0.36	1.20	0.66	0.31	0.43	0.53	1.70	1.70	0.75	0.94	0.79	0.42	0.31	0.75	0.71	0.82	0.94	0.42	0.36	0.38	0.74	0.61
Chromium	M	2450	mg/kg	1	910		280.00	300.00	300.00	420.00	300.00	410.00	450.00	280.00	330.00	400.00	120.00	180.00	38.00	110.00	110.00	77.00	240.00	80.00	70.00	80.00	310.00	130.00	80.00	88.00	98.00	100.00
Manganese	M	2450	mg/kg	5			19000.00	19000.00	19000.00	31000.00	18000.00	29000.00	31000.00	20000.00	25000.00	28000.00	5700.00	12000.00	6300.00	6800.00	6300.00	3300.00	17000.00	5800.00	4400.00	6400.00	18000.00	10000.00	6800.00	6700.00	7400.00	5200.00
Copper	M	2450	mg/kg	0.5	2400		43.00	29.00	32.00	35.00	25.00	35.00	39.00	30.00	27.00	32.00	38.00	35.00	24.00	35.00	25.00	19.00	150.00	24.00	20.00	31.00	34.00	22.00	35.00	24.00	27.00	28.00
Mercury	M	2450	mg/kg	0.1	1.2		0.42	0.38	0.52	0.51	0.48	0.52	0.95	0.50	0.64	0.76	2.00	0.64	0.40	0.42	0.33	0.20	0.49	0.52	0.43	0.70	0.63	0.25	0.16	0.18	0.24	0.25
Nickel	M	2450	mg/kg	0.5	1.30E+02		41.00	31.00	39.00	49.00	33.00	49.00	48.00	40.00	40.00	44.00	38.00	36.00	40.00	39.00	34.00	27.00	33.00	30.00	26.00	29.00	41.00	38.00	37.00	31.00	41.00	38.00
Lead	M	2450	mg/kg	0.5	2.00E+02		66.00	58.00	75.00	87.00	59.00	110.00	110.00	61.00	84.00	97.00	280.00	290.00	110.00	150.00	99.00	73.00	81.00	150.00	120.00	170.00	140.00	150.00	220.00	210.00	160.00	160.00
Selenium	M	2450	mg/kg	0.2	250		0.22	<0.2	<0.2	0.31	<0.2	<0.2	<0.2	0.36	0.22	<0.2	<0.2	0.39	<0.2	0.22	0.37	0.69	0.36	0.58	0.48	0.66	0.32	<0.2	0.45	0.47	<0.2	0.27
Vanadium	U	2450	mg/kg	5	410		350.00	410.00	360.00	1700.00	360.00	1600.00	1700.00	1000.00	1300.00	1500.00	170.00	250.00	60.00	130.00	140.00	100.00	890.00	120.00	100.00	130.00	410.00	480.00	290.00	330.00	310.00	250.00
Zinc	M	2450	mg/kg	0.5	3.70E+03		110.00	97.00	110.00	110.00	100.00	110.00	120.00	99.00	110.00	110.00	530.00	560.00	190.00	380.00	150.00	140.00	94.00	200.00	180.00	120.00	200.00	130.00	130.00	190.00	190.00	150.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02		<1	<1	<1	<1	<1	<1	5.50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03		<1	<1	<1	<1	<1	<1	29.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04		5.90	20.00	<1	16.00	<1	43.00	51.00	41.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04		230.00	200.00	90.00	290.00	<1	250.00	250.00	280.00	<1	<1	<1	<1	<1	<1	<1	<1	440.00	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5			240.00	220.00	90.00	310.00	<5	300.00	340.00	320.00	<5	<5	<5	<5	<5	<5	<5	<5	440.00	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	26.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	13.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260		17.00	11.00	4.60	11.00	<1	25.00	13.00	4.90	<1	<1	<1	140.00	<1	<1	<1	<1	6.70	<1	<1	<1	<1	<1	<1	<1	16.00	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03		62.00	84.00	51.00	110.00	<1	130.00	89.00	110.00	<1	<1	<1	250.00	<1	<1	<1	<1	130.00	<1	<1	<1	<1	<1	<1	<1	41.00	<1
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5			80.00	95.00	56.00	120.00	<5	160.00	100.00	120.00	<5	<5	<5	430.00	<5	<5	<5	<5	130.00	<5	<5	<5	<5	<5	<5	<5	57.00	<5
Total Petroleum Hydrocarbons	N	2680	mg/kg	10			320.00	320.00	150.00	430.00	<10	460.00	440.00	430.00	<10	<10	<10	430.00	<10	<10	<10	<10	570.00	<10	<10	<10	<10	<10	<10	<10	57.00	<10
Organic Matter	M	2625	%	0.4			5.00	1.00	2.80	3.50	4.70	2.10	6.60	6.90	5.50	3.30	12.00	7.90	9.50	8.50	6.90	6.20	13.00	1.50	12.00	2.80	2.80	13.00	64.00	24.00	16.00	28.00
Naphthalene	M	2800	mg/kg	0.1	15		<0.1	<0.1	2.10	0.59	<0.1	0.58	0.80	0.79	0.87	1.00	2.90	4.10	<0.1	4.20	0.82	<0.1	0.72	<0.1	1.50	<0.1	1.90	1.20	2.10	1.60	1.20	2.10
Acenaphthylene	N	2800	mg/kg	0.1	170		<0.1	<0.1	1.60	0.20	<0.1	0.14	0.18	0.11	0.14	0.12	0.41	1.00	<0.1	0.56	0.17	<0.1	0.20	<0.1	0.20	<0.1	0.43	0.13	0.16	0.21	0.21	0.22
Acenaphthene	M	2800	mg/kg	0.1	210		<0.1	<0.1	0.20	0.12	<0.1	0.17	0.18	0.19	0.18	0.16	0.28	0.22	<0.1	0.13	0.12	<0.1	0.18	<0.1	0.15	<0.1	<0.1	0.33	0.30	0.35	0.16	0.31
Fluorene	M	2800	mg/kg	0.1	170		<0.1	<0.1	1.90	0.17	<0.1	0.20	0.16	0.10	0.21	0.10	0.36	0.84	<0.1	0.33	0.27	<0.1	0.15	<0.1	0.26	<0.1	0.20	0.18	0.24	0.26	0.21	0.31
Phenanthrene	M	2800	mg/kg	0.1	95		2.50	1.70	27.00	4.00	2.30	4.70	2.10	1.40	1.70	2.00	2.10	6.00	0.56	1.80	1.40	0.91	3.60	0.46	1.80	0.46	2.00	3.40	4.10	4.10	2.60	2.90
Anthracene	M	2800	mg/kg	0.1	2400		0.53	0.36	4.70	0.53	0.56	0.57	0.47	0.26	0.27	0.33	0.54	1.90	0.12	0.63	0.28	0.20	0.74	0.11	0.32	0.12	0.50	0.41	0.59	0.88	0.59	0.59
Fluoranthene	M	2800	mg/kg	0.1	280		3.50	2.40	34.00	5.40	2.80	5.30	5.00	2.40	2.80	3.70	3.10	9.40	0.29	3.10	1.70	1.30	6.00	0.65	1.70	0.83	3.00	3.80	4.20	4.90	3.20	2.60
Pyrene	M	2800	mg/kg	0.1	620		2.50	1.80	23.00	3.50	2.00	3.80	4.10	1.90	2.30	2.90	2.50	6.50	0.30	2.60	1.30	1.00	4.10	0.48	1.30	0.74	2.20	3.00	3.10	3.70	2.40	1.90
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2		1.40	1.20	12.00	3.20	1.30	3.20	3.50	1.30	1.80	2.20	2.10	4.30	0.18	2.30	0.86	0.65	4.00	0.33	0.90	0.78	1.30	1.60	2.00	2.30	1.30	1.00
Chrysene	M	2800	mg/kg	0.1	15		1.50	1.10	12.00	3.90	1.40	3.70	3.70	1.70	2.10	2.80	2.10	4.10	0.25	2.20	0.79	0.74	4.30	0.35	0.96	0.80	1.30	1.90	2.40	2.70	1.40	1.20
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6		2.10	1.60	15.00	4.90	1.90	4.90	5.10	2.30	3.40	4.10	3.60	5.80	<0.1	3.80	1.10	1.10	5.30	0.51	1.40	1.20	1.80	2.30	2.70	2.90	1.70	1.20
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77		0.74	0.53	4.60	1.60	0.60	1.80	1.90	0.85	1.30	1.50	1.20	2.00	<0.1	1.20	0.38	0.33	1.80	0.19	0.45	0.44	0.73	0.87	0.84	0.90	0.51	0.35
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2		1.50	0.97	13.00	2.70	1.20	3.30	3.70	1.40	2.10	2.90	2.80	4.20	<0.1	2.80	0.84	0.80	3.40	0.37	1.00	1.00	1.30	1.70	1.80	2.00	1.20	0.87
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27		1.30	0.99	9.90	2.60	1.10	3.20	3.30	1.50	2.10	2.80	2.60	3.70	<0.1	2.30	0.71	<0.1	3.20	<0.1	0.83	<0.1	1.00	1.50	1.30	1.30	<0.1	<0.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24		0.27	0.16	1.40	0.59	0.16	0.54	0.61	0.23	0.41	0.53	0.41	0.53	<0.1	0.42	0.13	<0.1	0.77	<0.1	0.18	<0.1	0.22	0.24	0.37	0.19	<0.1	<0.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320		1.10	0.83	7.90	2.10	0.85	2.20	2.80	1.20	1.70	2.30	2.00	2.80	<0.1	1.80	0.64	<0.1	2.40	<0.1	0.75	<0.1	0.91	1.30	1.30	1.20	<0.1	<0.1
Total Of 16 PAH's	N	2800	mg/kg	2			19.00	14.00	170.00	36.00	16.00	38.00	38.00	18.00	23.00	29.00	29.00	57.00	<2	30.00	12.00	7.00	41.00	3.50	14.00	6.40	19.00	24.00	28.00	30.00	17.00	16.00
Resorcinol	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Results - Soil

Client: Rodgers Leask Environmental																														Stockpile: R-CSP						Stockpi
				Job No.:		22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	21-21180	21-21180	21-26393	21-26393	22-10648	22-10648		
				Sample ID.:	Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	1367462	1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471	1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480	1367481	1367482	1225698	1225700	1251520	1251521	1395707	1395708	210218-32
				Client Sample Ref.:		3CP47	3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62	3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71	3CP72	3CP73	R-CSP-1	R-CSP-2	R-CSP-3	R-CSP-4	R-CSP-7	R-CSP-8	W208-1
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID
				Top Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.2	0.2	0.2	0.2	0.2	0.2	0.20-0.20
				Bottom Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.2	0.2	0.2	0.2	0.2	0.2	
				Date Sampled:		04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	04/02/2022	18/06/2021	18/06/2021	29/07/2021	29/07/2021	18/03/2022	18/03/2022	17/02/2021
				Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB			NEW-ASB	NEW-ASB	NEW-ASB		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																																
ACM Type	U	2192		N/A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-		
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected			No Asbestos Detected	Asbestos Detec	No Asbestos Detected		Not Detected
Asbestos by Gravimetry	U	2192	%	0.001																														-
Total Asbestos	U	2192	%	0.001																														
Moisture	N	2030	%	0.02		3.10	3.90	3.10	4.80	5.90	4.70	5.90	5.70	7.10	5.40	5.30	4.30	4.60	10.00	8.80	13.00	11.00	6.60	4.90	4.00	5.00	2.20	2.20	8.50	7.80	12.00	11.00	13
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Gravel	Sand	Sand	Sand	Sand	Sandy Clay Loam
pH at 20C	M	2010	pH units	4		9.80	10.90	11.00	11.90	11.90	11.90	11.50	11.90	> 12.0	12.00	12.00	11.60	11.40	10.50	10.60	9.60	9.80	9.90	10.60	9.90	10.30	11.20	11.60	10.10	11.10	8.80	9.40	10.40
Cyanide (Total)	M	2300	mg/kg	0.5		0.90	0.50	<0.5	<0.5	<0.5	<0.5	<0.5	0.50	<0.5	1.00	1.20	4.30	5.30	0.90	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.40	1.50	2.10	1.30	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		1.80	0.73	1.10	<0.5	<0.5	0.70	0.54	<0.5	<0.5	0.54	0.58	0.67	0.78	1.00	1.00	3.30	3.00	1.40	0.86	1.10	1.20	0.78	0.93	0.75	20.00	2.60	8.60	<12
Iron (Total)	N	2430	mg/kg	100		30000.00	27000.00	27000.00	27000.00	27000.00	27000.00	28000.00	27000.00	27000.00	27000.00	27000.00	27000.00	26000.00	29000.00	29000.00	29000.00	26000.00	32000.00	30000.00	32000.00	31000.00	13000.00	16000.00	25000.00	23000.00	24000.00	23000.00	63900.00
Arsenic	M	2450	mg/kg	1	37	17.00	16.00	13.00	12.00	15.00	16.00	12.00	13.00	13.00	13.00	14.00	15.00	17.00	14.00	12.00	8.50	11.00	17.00	17.00	16.00	13.00	8.80	13.00	19.00	15.00	13.00	12.00	17.80
Cadmium	M	2450	mg/kg	0.1	26	0.55	0.52	0.43	0.83	0.82	0.52	0.52	0.69	0.48	0.47	0.63	0.47	0.77	0.59	0.55	0.86	0.56	0.45	0.43	0.17	0.25	0.25	0.40	1.10	1.40	0.78	0.44	0.38
Chromium	M	2450	mg/kg	1	910	100.00	320.00	290.00	310.00	300.00	270.00	210.00	270.00	250.00	280.00	290.00	280.00	240.00	150.00	180.00	46.00	77.00	67.00	110.00	45.00	51.00	62.00	66.00	90.00	260.00	120.00	40.00	205.00
Manganese	M	2450	mg/kg	5		6500.00	22000.00	21000.00	22000.00	20000.00	17000.00	13000.00	18000.00	18000.00	22000.00	22000.00	18000.00	18000.00	7500.00	8100.00	2200.00	3200.00	5100.00	6900.00	4400.00	4700.00	2900.00	3200.00	6000.00	11000.00	6500.00	2100.00	10100.00
Copper	M	2450	mg/kg	0.5	2400	25.00	35.00	30.00	30.00	31.00	27.00	21.00	26.00	26.00	31.00	34.00	25.00	23.00	22.00	23.00	20.00	29.00	23.00	26.00	27.00	29.00	6.30	8.50	70.00	130.00	25.00	28.00	33.60
Mercury	M	2450	mg/kg	0.1	1.2	0.26	0.74	0.70	1.00	1.20	0.59	0.48	0.49	0.53	0.83	0.83	0.69	0.85	0.58	0.56	0.39	0.52	0.25	0.25	0.13	0.17	<0.1	0.11	0.46	0.34	0.73	0.29	<1
Nickel	M	2450	mg/kg	0.5	1.30E+02	42.00	45.00	36.00	31.00	35.00	38.00	27.00	36.00	36.00	37.00	37.00	35.00	33.00	26.00	24.00	18.00	20.00	33.00	34.00	38.00	28.00	11.00	12.00	28.00	22.00	24.00	26.00	25.70
Lead	M	2450	mg/kg	0.5	2.00E+02	150.00	110.00	89.00	130.00	150.00	120.00	110.00	91.00	130.00	130.00	170.00	110.00	120.00	140.00	140.00	130.00	150.00	310.00	250.00	360.00	360.00	35.00	55.00	170.00	230.00	120.00	200.00	55.30
Selenium	M	2450	mg/kg	0.2	250	0.21	<0.2	<0.2	0.28	<0.2	0.31	0.61	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.36	0.43	0.95	0.95	0.67	0.25	0.67	0.59	0.67	<0.2	0.51	0.53	0.49	0.67	<10
Vanadium	U	2450	mg/kg	5	410	320.00	1200.00	1100.00	1000.00	1000.00	700.00	570.00	810.00	760.00	870.00	990.00	1000.00	1100.00	230.00	220.00	76.00	130.00	240.00	300.00	200.00	200.00	65.00	92.00	120.00	230.00	150.00	57.00	163.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	140.00	100.00	94.00	110.00	130.00	110.00	100.00	90.00	100.00	91.00	120.00	110.00	120.00	160.00	220.00	100.00	140.00	120.00	97.00	61.00	70.00	110.00	160.00	530.00	640.00	360.00	170.00	264.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.03
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.03
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8.30	4.80	11.00	8.20	7.90	8.30	11.00	7.30	7.40	6.50	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8.20	8.60	11.00	25.00	11.00	8.40	8.10	9.10	8.00	9.80	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	7.40	<1	<1	<1	15.00	<1	<1	<1	<1	<1	9.10	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	310.00	<1	<1	<1	<1	<1	<1	<1	<1	120.00	29.00	<1	<1	<1	8.10	300.00	<1	54.00	<1	<1	<1	220.00	67.00	9.55
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.06
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		<5	<5	<5	<5	310.00	<5	<5	<5	<5	<5	<5	17.00	13.00	140.00	62.00	26.00	17.00	19.00	24.00	330.00	16.00	54.00	<5	<5	<5	230.00	67.00	12.70
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.40	2.10	<1	<1	<1	<1	<1	7.20	<1	<1	<1	<1	<1	<1	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5.60	<1	<1	2.50	<1	<1	7.00	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.60	1.70	7.20	<1	2.20	<1	<1	16.00	3.90	<1	<1	<1	<1	<1	<1	<1	0.02
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.20	<1	12.00	28.00	<1	7.10	1.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5.80	6.20	8.80	40.00	16.00	1.40	3.00	1.20	1.50	3.40	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	<1	<1	<1	<1	7.90	<1	<1	<1	<1	<1	<1	9.60	1.00	15.00	210.00	<1	<1	3.60	<1	21.00	7.40	<1	<1	<1	<1	15.00	4.80	1.40
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	120.00	<1	<1	<1	<1	<1	<1	71.00	4.60	530.00	500.00	1.10	23.00	<1	1.60	110.00	<1	180.00	<1	<1	<1	140.00	88.00	7.17
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		<5	<5	<5	<5	130.00	<5	<5	<5	<5	<5	<5	96.00	14.00	580.00	780.00	22.00	36.00	7.60	26.00	140.00	18.00	180.00	<5	<5	<5	150.00	93.00	9.63
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		<10	<10	<10	<10	440.00	<10	<10	<10	<10	<10	<10	110.00	27.00	720.00	840.00	48.00	53.00	27.00	50.00	460.00	34.00	230.00	<10	<10	<10	380.00	160.00	22.40
Organic Matter	M	2625	%	0.4		7.20	4.70	5.20	6.20	7.20	11.00	7.10	6.20	5.30	4.70	8.30	9.80	7.60	13.00	24.00	48.00	72.00	55.00	72.00	91.00	60.00	1.70	3.50	5.20	3.30	9.80	36.00	4.12
Naphthalene	M	2800	mg/kg	0.1	15	1.40	0.67	1.10	0.68	0.70	0.84	1.40	0.71	0.78	0.50	0.68	0.89	1.30	1.00	<0.1	2.10	<0.1	1.70	2.00	2.70	<0.1	0.23	0.31	<0.1	<0.1	1.60	1.90	0.11
Acenaphthylene	N	2800	mg/kg	0.1	170	0.22	0.20	0.14	<0.1	0.14	0.23	0.32	0.18	0.38	0.15	0.20	0.24	0.57	0.17	<0.1	0.19	<0.1	<0.1	0.14	0.15	<0.1	<0.1	0.16	<0.1	<0.1	0.69	0.25	0.08
Acenaphthene	M	2800	mg/kg	0.1	210	0.26	0.25	0.23	0.16	0.18	0.10	0.71	0.18	0.15	0.14	0.15	0.13	0.20	<0.1	<0.1	0.20	<0.1	0.17	0.38	0.39	<0.1	<0.1	<0.1	<0.1	<0.1	0.21	0.15	0.02
Fluorene	M	2800	mg/kg	0.1	170	0.27	0.17	0.15	0.14	<0.1	0.20	0.50	0.14	0.32	0.23	0.17	0.29	0.51	0.33	<0.1	0.48	<0.1	0.22	0.43	0.36	<0.1	<0.1	<0.1	<0.1	<0.1	0.77	0.39	0.04
Phenanthrene	M	2800	mg/kg	0.1	95	2.10	3.50	3.20	3.30	3.40	5.40	6.20	3.40	5.20	2.70	4.30	2.60	1.90	2.10	1.90	2.90	4.00	2.30	3.00	3.50	0.44	0.63	0.91	1.90	1.00	6.20	2.40	0.32
Anthracene	M	2800	mg/kg	0.1	2400	0.43	0.60	0.58	0.38	0.38	1.10	1.20	0.48	0.67	0.86	0.54	0.79	1.80	0.84	0.72	0.76	1.40	0.52	0.75	0.76	0.12	0.15	0.26	0.43	0.22	1.90	0.51	0.12
Fluoranthene	M	2800	mg/kg	0.1	280	2.60	6.90	6.30	3.90	5.60	7.30	11.00	4.90	6.10	4.80	7.30	4.70	11.00	3.20	1.80	3.00	3.40	2.00	2.90	3.00	0.95	1.40	1.90	3.30	1.70	10.00	2.50	0.80
Pyrene	M	2800	mg/kg	0.1	620	2.20	4.60	4.40	2.60	4.10	4.40	8.60	3.30	3.80	3.80	5.10	3.70	7.00	2.80	1.90	2.40	3.40	1.60	2.50	2.60	0.81	1.00	1.20	2.80	1.50	7.50	1.80	0.63
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	1.30	4.30	3.40	1.80	3.00	3.50	6.10	2.80	2.90	3.80	3.20	3.00	5.20	2.60	1.30	1.60	2.00	0.87	1.30	1.40	0.74	0.60	0.85	1.60	0.78	4.40	1.10	0.38
Chrysene	M	2800	mg/kg	0.1	15	1.50	4.20	3.70	2.40	3.50	3.60	5.90	3.10	3.10	4.00	3.70	3.10	5.30	2.60	1.20	1.80	2.20	1.10	1.60	1.70	0.77	0.55	0.84	2.00	1.10	4.60	1.40	0.36
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	1.70	5.50	5.10	3.10	4.90	4.00	9.60	4.10	4.10	4.50	4.70	3.80	6.10	2.70	1.30	1.80	2.00	1.10	1.70	1.60	1.30	0.84	1.10	2.80	1.50	6.00	1.70	0.58
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.59	2.10	1.70	0.97	1.90	1.40	3.50	1.40	1.30	2.70	1.80	2.30	2.30	2.00	0.61	0.80	0.89	0.37	0.57	0.51	0.48	0.48	0.42	0.91	0.45	2.20	0.46	0.19
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	1.30	3.90	3.60	1.90	3.70	2.70	10.00	3.00	3.00	3.90	3.50	3.20	4.20	2.50	0.92	1.30	1.70	0.77	1.30	1.30	1.10	0.56	0.79	1.50	0.77	4.20	1.10	0.34
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	1.10	3.30	2.90	1.80	3.20	2.10	7.50	2.60	2.20	3.60	2.90	2.90	3.50	2.40	<0.1	1.10	<0.1	0.53	0.76	0.77	0.74	0.61	0.34	1.50	0.89	3.20	0.72	0.22
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.66	0.90	0.54	0.42	0.63	0.54	1.10	0.56	0.54	2.00	0.61	1.50	0.84	1.60	<0.1	0.55	<0.1	0.19	0.24	0.27	0.26	<0.1	<0.1	0.26	0.15	0.66	0.21	0.05
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	1.10	2.30	2.30	1.50	2.30	1.60	5.70	2.00	1.60	3.20	2.50	2.60	2.80	2.10	<0.1	0.99	<0.1	0.60	1.00	0.93	0.67	0.49	0.37	1.50	0.93	3.40	0.87	0.26
Total Of 16 PAH's	N	2800	mg/kg	2		19.00	43.00	39.00	25.00	38.00	39.00	79.00	33.00	36.00	41.00	41.00	36.00	55.00	29.00	12.00	22.00	21.00	14.00	20.00	22.00	8.40	7.60	9.60	21.00	11.00	58.00	18.00	4.50
Resorcinol	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Cresols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Trimethylphenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.04
Benzene	M	2760	µg/kg	1	87.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<180
Toluene	M	2760	µg/kg	1	130000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01

Results - Soil

Client: Rodgers Leask Environmental						e: W208	Stockpile: 3CP2										Stockpile: 5e1-SP1-1										Stockpile: 5E1-SP2				Stockpi
			Job No.:				22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-23919	22-23919	22-26760	22-14707	22-14707	22-14707	22-15876	22-15876	22-15876	22-15876	22-19583	22-19583	22-19583	22-19583	22-19583	22-14707	22-14707	22-14707	22-15876	22-16610
			Sample ID.:		Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	210218-32	1370291	1370292	1370293	1370294	1370295	1370296	1370297	1455828	1455831	1468353	1414486	1414487	1414488	1419723	1419724	1419725	1419726	1435997	1435998	1435999	1436000	1436001	1414489	1414490	1414491	1419727	1422842
			Client Sample Ref.:			W208-2	3CP1-47	3CP1-48	3CP1-49	3CP1-50	3CP1-51	3CP1-52	3CP1-53	3CP2-1	3CP2-2	3CP2-3	5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11	5e1-SP1-12	5e1-SP2-1	5e1-SP2-2	5e1-SP2-3	5e1-SP2-4	R147-1
			Sample Type:			SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):			0.20-0.20								0.20	0.20	0.20	0.2	0.2	0.2	0.20	0.20	0.20	0.20						0.2	0.2	0.2	0.20	
			Bottom Depth (m):											0.20	0.20	0.20	0.2	0.2	0.2										0.2	0.2	0.2		
			Date Sampled:			17/02/2021	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022	22/06/2022	22/06/2022	13/07/2022	19/04/2022	19/04/2022	19/04/2022	28/04/2022	28/04/2022	28/04/2022	28/04/2022	24/05/2022	24/05/2022	24/05/2022	24/05/2022	24/05/2022	19/04/2022	19/04/2022	19/04/2022	28/04/2022	04/05/2022
			Asbestos Lab:				NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	DURHAM		DURHAM	NEW-ASB		NEW-ASB	COVENTRY		COVENTRY			DURHAM		DURHAM			NEW-ASB		COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																												
ACM Type	U	2192		N/A			-		-		-		-	-		-	-		-	-		-			-			-		-	-	-
Asbestos Identification	U	2192		N/A			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		Asbestos Detec	Asbestos Detec		Asbestos Detec			Asbestos Detec		Asbestos Detec			No Asbestos Detec		Asbestos Detec	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001		-																										
Total Asbestos	U	2192	%	0.001																												
Moisture	N	2030	%	0.02		17	8.70	8.00	6.60	9.90	8.80	6.70	7.90	9.40	13.00	9.20	41.00	39.00	35.00	7.30	3.70	3.60	8.40	15.00	16.00	13.00	22.00	12.00	27.00	27.00	39.00	1.80	11.00
Soil Colour	N	2040		N/A		Dark Brown	Brown	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Grey	Brown	Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots
Soil Texture	N	2040		N/A		Sandy Clay Loam	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Sand	Sand	Sand	Clay	Gravel	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Gravel	Gravel	Sand	Sand
pH at 20C	M	2010	pH units	4		10.60	9.30	11.00	11.50	12.00	> 12.0	> 12.0	> 12.0	6.10	7.70	10.10	10.70	11.10	11.00	10.40	9.20	10.20	9.60	9.50	8.60	10.00	8.30	9.30	10.40	9.90	10.70	9.00	8.80
Cyanide (Total)	M	2300	mg/kg	0.5		<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.70	0.90	<0.5	4.30	<0.5	<0.5	1.50	<0.5	<0.5	1.20	<0.5	<0.5	<0.5	1.40	<0.5	<0.5	5.90	<0.5	3.00	<0.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	12.00	10.00	5.30	2.60	2.00	1.50	1.30	2.20	6.90	5.10	2.70	3.90	11.00	20.00	4.00	0.86	11.00	2.90	22.00	2.70	33.00	1.60	7.30	10.00	0.93	20.00	4.30
Iron (Total)	N	2430	mg/kg	100		61700.00	200000.00	120000.00	140000.00	150000.00	140000.00	140000.00	130000.00	28000.00	26000.00	57000.00	24000.00	40000.00	39000.00	44000.00	51000.00	50000.00	30000.00	32000.00	33000.00	29000.00	22000.00	36000.00	30000.00	31000.00	35000.00	39000.00	39000.00
Arsenic	M	2450	mg/kg	1	37	11.60	14.00	15.00	17.00	22.00	20.00	20.00	22.00	12.00	10.00	6.20	7.40	12.00	8.80	26.00	37.00	35.00	12.00	17.00	10.00	15.00	8.80	21.00	6.00	6.40	9.00	16.00	7.20
Cadmium	M	2450	mg/kg	0.1	26	0.45	0.85	0.83	0.83	0.53	0.43	0.25	0.46	0.36	0.56	0.25	0.44	0.56	0.16	<0.1	0.75	<0.1	<0.1	0.24	0.25	0.12	0.18	0.28	0.24	0.35	0.39	0.66	0.91
Chromium	M	2450	mg/kg	1	910	104.00	70.00	280.00	390.00	480.00	420.00	550.00	550.00	89.00	39.00	200.00	74.00	58.00	50.00	57.00	66.00	46.00	23.00	39.00	18.00	37.00	12.00	41.00	35.00	28.00	210.00	66.00	100.00
Manganese	M	2450	mg/kg	5		6800.00	4900.00	23000.00	24000.00	36000.00	32000.00	38000.00	43000.00	6500.00	2400.00	11000.00	4500.00	3600.00	2800.00	1400.00	10000.00	5500.00	900.00	3900.00	1200.00	3200.00	580.00	3700.00	2400.00	1500.00	16000.00	4500.00	4900.00
Copper	M	2450	mg/kg	0.5	2400	27.90	23.00	25.00	25.00	52.00	31.00	25.00	29.00	32.00	18.00	17.00	11.00	13.00	12.00	26.00	98.00	35.00	27.00	21.00	20.00	7.70	17.00	23.00	11.00	12.00	26.00	25.00	23.00
Mercury	M	2450	mg/kg	0.1	1.2	<1	0.37	0.27	0.34	0.73	0.66	0.48	0.54	0.17	0.23	0.14	<0.1	0.26	0.10	0.15	1.30	0.12	0.06	0.18	0.07	0.05	0.10	0.26	<0.1	0.29	0.36	0.14	0.32
Nickel	M	2450	mg/kg	0.5	1.30E+02	24.20	32.00	39.00	37.00	46.00	41.00	40.00	41.00	18.00	18.00	14.00	15.00	19.00	17.00	28.00	32.00	28.00	24.00	17.00	20.00	15.00	20.00	20.00	17.00	13.00	31.00	31.00	17.00
Lead	M	2450	mg/kg	0.5	2.00E+02	98.30	88.00	63.00	69.00	61.00	53.00	26.00	37.00	59.00	59.00	44.00	25.00	34.00	26.00	33.00	210.00	72.00	30.00	45.00	48.00	21.00	33.00	71.00	29.00	46.00	58.00	110.00	190.00
Selenium	M	2450	mg/kg	0.2	250	<10	0.27	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	1.30	1.60	1.80	<0.2	<0.2	0.23	1.50	1.40	0.89	1.70	2.90	1.70	2.00	3.50	1.40	0.29	0.27	0.22	1.60	1.50
Vanadium	U	2450	mg/kg	5	410	150.00	91.00	1400.00	1600.00	1600.00	1600.00	2200.00	2300.00	330.00	74.00	410.00	70.00	130.00	72.00	100.00	150.00	140.00	46.00	90.00	44.00	78.00	27.00	100.00	75.00	57.00	810.00	170.00	160.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	285.00	240.00	130.00	140.00	120.00	110.00	69.00	78.00	130.00	250.00	110.00	70.00	83.00	58.00	100.00	440.00	120.00	64.00	96.00	94.00	61.00	47.00	150.00	88.00	120.00	100.00	350.00	500.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	0.04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	0.06	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	33.00	32.00	<1	310.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4.70	<1	<1	<1	<1	11.00
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	12.00	14.00	<1	830.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	15.00	<1	<1	<1	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	5.26	<1	190.00	160.00	<1	<1	<1	<1	<1	<1	<1	2500.00	<1	<1	40.00	<1	<1	<1	<1	150.00	61.00	<1	51.00	210.00	210.00	<1	240.00	230.00
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	1.56	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		7.22	<5	190.00	160.00	<5	<5	<5	<5	45.00	46.00	<5	3700.00	<5	<5	40.00	<5	<5	<5	<5	150.00	61.00	<5	71.00	210.00	210.00	<5	240.00	240.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	0.04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	20.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	1.44	<1	<1	<1	<1	<1	<1	<1	3.20	3.30	<1	24.00	<1	<1	120.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	6.47	<1	290.00	<1	<1	<1	<1	<1	48.00	24.00	<1	820.00	<1	<1	190.00	<1	<1	<1	<1	630.00	140.00	<1	140.00	<1	<1	<1	190.00	<1
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		8.91	<5	290.00	<5	<5	<5	<5	<5	51.00	27.00	<5	840.00	<5	<5	330.00	<5	<5	<5	<5	630.00	140.00	<5	140.00	<5	<5	<5	190.00	<5
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		16.30	<10	480.00	160.00	<10	<10	<10	<10	96.00	73.00	<10	4500.00	<10	<10	370.00	<10	<10	<10	<10	780.00	200.00	<10	210.00	210.00	210.00	<10	440.00	240.00
Organic Matter	M	2625	%	0.4		6.86	12.00	3.30	2.60	6.70	3.60	2.60	2.20	6.80	10.00	5.30	10.00	14.00	17.00	5.50	3.30	0.98	12.00	3.10	8.30	2.20	5.20	7.40	7.90	21.00	3.80	13.00	13.00
Naphthalene	M	2800	mg/kg	0.1	15	0.10	22.00	18.00	11.00	9.70	6.90	5.30	6.60	0.89	0.75	<0.1	7.50	1.30	3.00	1.20	<0.1	0.31	1.30	<0.1	<0.1	<0.1	<0.1	3.10	<0.1	2.40	0.59	1.10	4.60
Acenaphthylene	N	2800	mg/kg	0.1	170	0.08	2.00	0.30	0.32	0.25	0.25	0.10	0.19	0.17	0.11	<0.1	0.47	0.12	0.32	0.17	<0.1	0.22	0.29	<0.1	<0.1	<0.1	<0.1	0.22	<0.1	0.26	0.16	0.12	0.31
Acenaphthene	M	2800	mg/kg	0.1	210	0.02	1.40	1.80	0.80	1.20	0.90	0.45	0.58	0.14	0.11	<0.1	0.30	0.14	0.36	2.70	<0.1	0.16	0.17	<0.1	<0.1	<0.1	<0.1	0.29	<0.1	0.15	<0.1	0.18	0.15
Fluorene	M	2800	mg/kg	0.1	170	0.09	2.10	0.50	0.52	0.31	0.26	<0.1	0.14	0.24	0.24	<0.1	0.52	0.25	0.49	4.30	<0.1	0.15	0.44	<0.1	<0.1	<0.1	<0.1	0.29	<0.1	0.39	0.17	0.14	0.15
Phenanthrene	M	2800	mg/kg	0.1	95	0.53	14.00	4.70	5.50	4.70	3.90	1.50	2.90	2.40	1.40	2.10	2.80	1.50	3.40	57.00	0.55	0.60	2.40	<0.1	0.68	<0.1	<0.1	1.90	0.83	2.80	1.40	0.94	1.20
Anthracene	M	2800	mg/kg	0.1	2400	0.17	3.70	1.10	1.00	0.58	0.54	0.21	0.35	0.48	0.30	0.48	0.86	0.35	0.68	11.00	<0.1	0.17	0.56	<0.1	0.14	<0.1	<0.1	0.36	0.24	0.56	0.30	0.14	0.28
Fluoranthene	M	2800	mg/kg	0.1	280	0.84	19.00	8.50	6.10	6.40	6.10	2.20	4.90	2.90	1.50	2.40	4.60	1.80	4.50	40.00	0.39	0.50	2.40	0.89	0.43	0.40	0.28	1.80	1.20	2.80	2.10	0.99	2.40
Pyrene	M	2800	mg/kg	0.1	620	0.66	13.00	7.20	4.10	5.10	4.70	1.50	3.60	1.90	1.10	1.70	3.60	1.30	3.40	29.00	0.45	0.54	1.70	0.65	0.38	0.31	0.17	1.30	0.98	2.30	1.40	0.73	2.00
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	0.38	6.80	4.60	2.90	3.30	3.50	0.99	3.00	1.50	0.73	1.10	2.30	0.89	2.20	11.00	<0.1	0.20	0.85	<0.1	<0.1	<0.1	<0.1	1.00	0.72	1.20	0.99	0.62	1.40
Chrysene	M	2800	mg/kg	0.1	15	0.37	7.30	5.10	3.30	4.00	4.00	1.30	3.50	1.60	0.56	0.93	2.30	0.76	1.80	11.00	<0.1	0.18	0.80	<0.1	<0.1	<0.1	<0.1	0.94	0.68	1.10	1.20	0.60	1.40
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	0.53	8.90	7.50	4.10	5.20	5.40	1.50	4.40	2.00	1.00	1.60	3.00	1.30	3.10	9.40	<0.1	0.22	0.93	<0.1	<0.1	<0.1	<0.1	1.00	0.62	1.90	1.00	0.89	2.80
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.18	2.90	2.70	1.50	1.90	2.00	0.48	1.60	0.74	0.30	0.50	0.96	0.34	1.00	3.50	<0.1	0.14	0.39	<0.1	<0.1	<0.1	<0.1	0.63	0.25	0.24	0.33	0.32	0.70
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.30	7.00	6.30	3.10	4.50	4.60	1.00	3.30	1.30	0.67	1.10	2.50	1.10	2.60	6.80	<0.1	0.20	0.71	<0.1	<0.1	<0.1	<0.1	1.00	0.73	1.30	0.87	0.68	2.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	0.25	5.50	5.10	2.80	3.40	3.70	1.10	2.50	0.80	<0.1	<0.1	1.90	0.65	1.70	3.60	<0.1	0.20	0.43	<0.1	<0.1	<0.1	<0.1	0.71	0.61	0.94	0.74	0.43	2.20
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.06	0.97	0.88	0.57	0.70	0.70	0.20	0.59	0.17	<0.1	<0.1	0.44	0.12	0.51	0.91	<0.1	0.12	0.24	<0.1	<0.1	<0.1	<0.1	0.12	0.14	0.15	0.26	0.24	0.27
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	0.23	4.80	4.80	2.60	3.50	3.50	0.93	2.60	0.95	<0.1	<0.1	1.60	0.68	1.60	3.30	<0.1	0.18	0.44	<0.1	<0.1	<0.1	<0.1	0.75	0.57	0.96	0.68	0.43	1.40
Total Of 16 PAH's	N	2800	mg/kg	2		4.76	120.00	79.00	50.00	55.00	51.00	19.00	41.00	18.00	8.80	12.00	36.00	13.00	31.00	200.00	<2	4.10	14.00	<2	<2	<2	<2	15.00	7.60	20.00	12.00	8.50	23.00
Resorcinol	M	2920	mg/kg	0.02		0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02		0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00	<180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	21.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00	<140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	9.40	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	6.90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	21.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	9.60	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Results - Soil

						Stockpile: R147	Stockpile: R146	Stockpile: R148		Stockpile: R159		Stockpile: R162	Stockpile: R164								Stockpile: W131								
Client: Rodgers Leask Environmental					**Job No.:**		22-16610	22-16610	22-16610	22-16610	22-16661	22-16661	22-16610	22-23680	22-23680	22-23919	22-23919	22-24434	22-24434	22-24434	22-24434	22-24434	22-24434	210218-32	210218-32	210218-32	210218-32	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
					Sample ID.:	**Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)**	1422843	1422844	1422845	1422846	1423055	1423056	1422841	1454849	1454850	1455829	1455830	1458085	1458086	1458087	1458088	1458089	1458090										
					Client Sample Ref.:		R147-2	R146-1	R148-1	R148-2	R159-1	R159-2	R162-1	R164-1	R164-2	R164-3	R164-4	R164-5	R164-6	R164-7	R164-8	R164-9	R164-10	W131-1	W131-2	W131-3	W131-4	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6	W204-7
					Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
					Top Depth (m):									0.20	0.20	0.20	0.20	-	-	-	-	-	-	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20
					Bottom Depth (m):									0.20	0.20	0.20	0.20	-	-	-	-	-	-											
					Date Sampled:		04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	04/05/2022	22/06/2022	22/06/2022	22/06/2022	22/06/2022	27/06/2022	27/06/2022	27/06/2022	27/06/2022	27/06/2022	27/06/2022	17/02/2021	17/02/2021	17/02/2021	17/02/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021
					Asbestos Lab:			DURHAM	DURHAM	DURHAM	COVENTRY		DURHAM		DURHAM		DURHAM	DURHAM		DURHAM		DURHAM											
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A			-	-	-	-	-		-		-		-	-		-		-						Amosite (Brown) Asbestos						
Asbestos Identification	U	2192		N/A			No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Not Detected	-	Not Detected	-	Not Detected	-	Detected	-	Not Detected	-	Not Detected
Asbestos by Gravimetry	U	2192	%	0.001			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.016	-	-	-	-
Total Asbestos	U	2192	%	0.001																														
Moisture	N	2030	%	0.02		9.60	6.10	8.90	6.20	6.00	6.90	9.90	7.20	7.40	4.80	6.20	0.58	2.40	0.51	7.70	1.10	0.15	11	12	12	12	13	15	14	18	12	11	13
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Roots and Stones	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Vegetation	Stones	None	Stones	Stones	Stones	Stones	None
Soil Texture	N	2040		N/A		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Loam	Loam	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand											
pH at 20C	M	2010	pH units	4		8.80	8.60	8.60	8.60	8.50	8.80	8.70	7.70	7.50	6.50	6.50	11.10	10.40	9.60	10.30	11.80	11.70	9.16	8.95	8.63	8.88	11.40	11.40	9.21	9.11	11.90	12.00	11.30
Cyanide (Total)	M	2300	mg/kg	0.5		0.50	<0.5	<0.5	0.50	<0.5	<0.5	0.70	15.00	12.00	2.40	1.80	2.00	13.00	<0.5	0.50	<0.5	0.70	1.11	<1	1.11	<1	<1	<1	2.93	2.47	<1	<1	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		4.50	7.20	7.80	66.00	2.30	3.90	9.30	3.20	2.60	2.90	2.60	4.30	4.10	3.70	16.00	5.10	3.10	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100		32000.00	44000.00	27000.00	28000.00	57000.00	45000.00	37000.00	26000.00	26000.00	25000.00	24000.00	20000.00	14000.00	19000.00	16000.00	22000.00	24000.00	148000.00	141000.00	233000.00	111000.00	117000.00	107000.00	133000.00	125000.00	130000.00	92300.00	107000.00
Arsenic	M	2450	mg/kg	1	37	4.80	7.50	12.00	6.00	21.00	12.00	31.00	5.70	16.00	7.00	12.00	7.00	6.70	8.30	8.40	5.10	5.30	9.03	12.70	19.40	11.10	5.29	6.50	12.10	8.93	2.08	1.67	7.82
Cadmium	M	2450	mg/kg	0.1	26	0.52	0.47	0.26	0.18	0.15	0.51	0.61	0.83	1.10	0.71	0.52	0.55	1.00	0.25	0.78	0.47	0.70	<0.2	<0.2	<0.2	0.38	<0.02	1.10	0.89	3.72	<0.02	0.51	<0.02
Chromium	M	2450	mg/kg	1	910	49.00	97.00	22.00	19.00	12.00	100.00	51.00	49.00	85.00	240.00	420.00	210.00	54.00	85.00	94.00	400.00	200.00	26.10	62.20	10.90	124.00	232.00	332.00	126.00	156.00	310.00	304.00	269.00
Manganese	M	2450	mg/kg	5		2400.00	4800.00	920.00	1000.00	7000.00	5500.00	6400.00	3000.00	4900.00	8500.00	14000.00	8300.00	2900.00	3800.00	4500.00	20000.00	9500.00	4520.00	6790.00	6260.00	10700.00	17300.00	15300.00	17000.00	12600.00	24900.00	16200.00	23300.00
Copper	M	2450	mg/kg	0.5	2400	15.00	20.00	17.00	11.00	70.00	27.00	27.00	22.00	39.00	17.00	21.00	19.00	16.00	13.00	18.00	27.00	22.00	41.00	25.10	45.50	28.60	17.90	17.00	22.70	21.00	9.90	7.53	18.10
Mercury	M	2450	mg/kg	0.1	1.2	0.23	0.25	0.21	0.20	4.50	0.32	0.28	0.31	0.35	0.11	0.12	0.09	0.20	0.05	0.10	0.33	0.20	<1	<1	<1	<1	<0.1	<0.1	0.21	<0.1	<0.1	<0.1	<0.1
Nickel	M	2450	mg/kg	0.5	1.30E+02	11.00	19.00	12.00	12.00	7.10	25.00	25.00	22.00	27.00	15.00	15.00	17.00	22.00	19.00	17.00	11.00	13.00	27.20	27.10	43.60	25.20	9.57	27.90	20.10	13.90	2.89	3.66	10.90
Lead	M	2450	mg/kg	0.5	2.00E+02	72.00	68.00	26.00	33.00	58.00	58.00	57.00	130.00	160.00	60.00	69.00	72.00	100.00	35.00	81.00	69.00	93.00	53.10	114.00	85.10	121.00	42.50	253.00	283.00	393.00	<0.7	1.66	39.80
Selenium	M	2450	mg/kg	0.2	250	1.20	1.60	1.40	1.20	1.30	2.30	1.40	0.97	1.50	1.50	2.70	2.20	0.89	1.90	1.60	0.80	1.60	<10	<10	<10	<10	3.75	3.83	4.94	3.94	4.96	5.97	6.56
Vanadium	U	2450	mg/kg	5	410	88.00	120.00	28.00	25.00	19.00	76.00	80.00	58.00	91.00	170.00	290.00	170.00	63.00	75.00	96.00	340.00	240.00	99.90	137.00	99.00	193.00	248.00	326.00	490.00	662.00	233.00	228.00	259.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	220.00	170.00	48.00	62.00	64.00	170.00	150.00	330.00	350.00	250.00	230.00	300.00	280.00	130.00	310.00	140.00	200.00	168.00	353.00	299.00	373.00	189.00	248.00	1310.00	1580.00	48.30	48.10	174.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	0.02	0.03	<0.01	<0.01	0.02	0.05	0.04
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.02	<0.01	0.02	0.04	0.04
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.34	2.17	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	10.00	10.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5.50	2.73	<1	<1	7.37	5.75	3.54
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	20.00	25.00	<1	<1	<1	59.00	<1	<1	57.00	77.00	<1	5.43	<1	6.96	32.40	12.50	18.70	19.30	10.10	19.30	15.70
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	140.00	60.00	<1	<1	<1	200.00	<1	170.00	240.00	<1	4.20	<1	210.00	210.00	280.00	290.00	160.00	12.70	40.40	10.70	42.60	54.60	29.90	66.00	56.40	69.90	106.00	28.60
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	35.00	<1	<1	<1	210.00	42.00	<1	<1	<1	3.12	3.96	2.72	9.79	9.23	4.60	17.30	6.90	5.12	6.24	5.74
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		150.00	71.00	<5	<5	<5	200.00	<5	190.00	300.00	<5	<5	<5	470.00	250.00	280.00	350.00	240.00	16.60	50.00	14.00	60.40	102.00	50.00	103.00	83.40	95.80	140.00	54.10
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.01	<0.01	0.01	0.03	0.03
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	12.60	10.60	<1	<1	4.40	4.56	7.19
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	14.00	24.00	<1	<1	<1	41.00	9.60	<1	<1	6.00	<1	1.28	3.48	<1	18.70	13.50	<1	<1	9.74	37.30	12.80
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	<1	5.90	<1	<1	<1	<1	<1	71.00	170.00	<1	9.40	<1	100.00	110.00	<1	<1	33.00	1.25	3.39	4.60	2.11	109.00	78.20	2.20	3.01	23.60	202.00	72.20
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	<1	66.00	<1	<1	<1	<1	<1	1600.00	2500.00	<1	79.00	<1	2500.00	760.00	50.00	120.00	500.00	13.50	28.70	15.10	28.30	185.00	116.00	23.70	34.00	39.50	246.00	114.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	410.00	580.00	<1	<1	<1	120.00	64.00	<1	<1	45.00	3.38	5.29	3.85	4.80	20.70	12.40	<1	2.13	1.04	22.20	10.70
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		<5	72.00	<5	<5	<5	<5	<5	2100.00	3300.00	<5	89.00	<5	2700.00	940.00	50.00	120.00	580.00	18.10	38.60	27.00	35.80	347.00	231.00	27.50	39.50	78.30	512.00	217.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		150.00	140.00	<10	<10	<10	200.00	<10	2300.00	3600.00	<10	93.00	<10	3200.00	1200.00	330.00	470.00	820.00	34.70	88.70	41.00	96.10	449.00	281.00	131.00	123.00	174.00	652.00	271.00
Organic Matter	M	2625	%	0.4		31.00	28.00	38.00	10.00	1.50	9.00	24.00	9.00	9.10	6.50	6.40	11.00	9.00	10.00	11.00	2.40	7.80	5.83	4.50	4.41	18.30	30.50	38.30	3.09	4.88	62.20	62.80	49.00
Naphthalene	M	2800	mg/kg	0.1	15	9.60	11.00	8.40	5.50	<0.1	4.80	12.00	<0.1	<0.1	<0.1	<0.1	<0.1	1.50	<0.1	<0.1	<0.1	<0.1	0.10	0.10	0.05	0.04	11.90	5.89	0.24	0.21	3.58	2.63	8.47
Acenaphthylene	N	2800	mg/kg	0.1	170	1.00	1.70	0.32	0.95	<0.1	0.67	0.72	<0.1	<0.1	<0.1	<0.1	<0.1	9.00	<0.1	<0.1	<0.1	<0.1	0.14	0.05	0.02	0.05	4.51	1.76	0.02	0.02	0.82	0.82	2.55
Acenaphthene	M	2800	mg/kg	0.1	210	0.27	0.35	0.24	0.18	<0.1	0.18	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	0.03	0.01	<0.01	0.01	0.28	0.15	0.02	0.02	0.07	0.06	0.23
Fluorene	M	2800	mg/kg	0.1	170	0.78	1.20	0.28	0.13	<0.1	0.84	0.53	<0.1	<0.1	<0.1	<0.1	<0.1	0.32	<0.1	<0.1	<0.1	<0.1	0.29	0.02	0.01	0.02	4.75	1.14	0.03	0.03	0.48	0.61	1.68
Phenanthrene	M	2800	mg/kg	0.1	95	6.50	10.00	1.80	0.89	0.29	4.70	3.30	1.50	1.40	0.51	2.80	0.24	1.90	<0.1	2.30	<0.1	1.30	1.26	0.20	0.14	0.18	29.30	8.11	0.28	0.26	4.27	6.05	12.20
Anthracene	M	2800	mg/kg	0.1	2400	2.10	3.30	0.41	0.37	0.13	1.30	0.97	3.30	3.10	0.30	1.20	0.19	6.30	<0.1	2.40	<0.1	0.97	0.26	0.05	0.03	<0.02	10.00	2.13	0.08	0.10	1.00	2.17	3.53
Fluoranthene	M	2800	mg/kg	0.1	280	15.00	24.00	2.40	4.30	0.32	8.40	6.60	20.00	18.00	1.60	9.10	1.00	27.00	0.46	9.50	0.75	6.90	1.36	0.45	0.18	0.44	31.50	9.52	0.56	0.54	5.94	8.38	17.20
Pyrene	M	2800	mg/kg	0.1	620	11.00	16.00	1.80	3.60	0.26	6.00	4.80	21.00	18.00	1.40	6.60	1.20	36.00	0.39	7.40	0.73	7.00	0.83	0.39	0.14	0.38	21.20	6.43	0.56	0.53	4.21	5.91	12.40
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	6.60	13.00	1.20	2.90	<0.1	4.10	3.60	17.00	15.00	1.10	4.20	0.70	22.00	<0.1	3.70	0.29	4.50	0.47	0.29	0.09	0.24	9.91	3.31	0.33	0.31	2.10	2.60	6.24
Chrysene	M	2800	mg/kg	0.1	15	6.60	13.00	0.96	2.50	<0.1	4.00	3.20	18.00	16.00	1.20	5.00	0.73	37.00	<0.1	5.70	0.38	7.40	0.43	0.32	0.11	0.27	8.26	2.69	0.35	0.35	2.03	2.17	5.26
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	9.50	19.00	1.90	6.60	<0.1	6.10	5.80	40.00	36.00	2.20	7.30	1.70	65.00	<0.1	6.50	<0.1	12.00	0.57	0.55	0.14	0.45	11.10	4.30	0.57	0.55	2.44	2.93	7.94
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	3.40	6.30	0.63	1.90	<0.1	1.80	2.00	12.00	11.00	0.67	2.20	0.57	22.00	<0.1	2.10	<0.1	4.20	0.21	0.17	0.04	0.11	4.22	1.34	0.18	0.18	0.76	0.92	2.65
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	7.80	14.00	1.20	5.10	<0.1	4.20	4.40	33.00	29.00	1.50	5.20	1.20	55.00	<0.1	5.50	<0.1	9.90	0.33	0.32	0.07	0.25	7.24	2.55	0.36	0.35	1.43	1.93	4.75
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	6.60	13.00	1.40	5.30	<0.1	3.10	3.90	35.00	30.00	1.20	4.50	1.20	50.00	<0.1	<0.1	<0.1	10.00	0.26	0.29	0.07	0.22	6.53	2.45	0.31	0.31	1.17	1.43	4.30
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.88	2.20	0.24	0.79	<0.1	0.62	0.50	4.90	4.20	0.24	0.75	0.19	8.30	<0.1	<0.1	<0.1	1.20	0.05	0.06	<0.02	<0.02	0.99	0.41	0.06	0.04	0.23	0.24	0.68
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	4.60	8.30	0.97	4.00	<0.1	2.80	2.90	30.00	26.00	1.30	4.30	1.20	49.00	<0.1	<0.1	<0.1	9.80	0.23	0.28	0.07	0.24	4.36	1.69	0.28	0.26	0.87	1.03	2.97
Total Of 16 PAH's	N	2800	mg/kg	2		92.00	160.00	24.00	45.00	<2	54.00	55.00	240.00	210.00	13.00	53.00	10.00	390.00	<2	45.00	2.20	75.00	6.81	3.55	1.16	2.90	166.00	53.90	4.22	4.06	31.40	39.90	93.00
Resorcinol	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	0.01	0.01
Cresols	M	2920	mg/kg	0.02		<0.02	<0.02	0.24	<0.02	<0.02	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	0.01	0.02	0.04	<0.01	<0.01	<0.01	<0.01	0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	0.51
1-Naphthol	N	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.1	<0.1	0.24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	0.53
Benzene	M	2760	µg/kg	1	87.00	<1	<1	<1	<1	160.00	240.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<180	<180	<180	<180	<180	<180	<180	<180	<1800	<1800	<180
Toluene	M	2760	µg/kg	1	130000.00	<1	<1	<1	<1	22.00	6.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<140	<140	<140	<140	<140	<140	<140	<140	<1400	<1400	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<1	<1	<1	<1	33.00	6.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<80	<80	<80	<80	<80	<80	<80	<80	<800	<800	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<1	<1	<1	<1	36.00	5.70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<1	<1	<1	<1	7.20	3.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200

Results - Soil

Client: Rodgers Leask Environmental						Stockpile: W204												Stockpile: W206				Stockpile: W209									
Job No.:						210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210217-69	210217-69	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
Sample ID.:					Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	W204-8	W204-9	W204-10	W204-11	W204-12	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18	W204-19	W204-20	W206-1	W206-2	W206-3	W206-4	W209-1	W209-2	W209-3	W209-4	W209-5	W209-6	W209C-1	W209C-2	W209C-3	W209C-4	W209B-1
Client Sample Ref.:						SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Sample Type:						0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20
Top Depth (m):																															
Bottom Depth (m):																															
Date Sampled:						2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	15/02/2021	15/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
Asbestos Lab:																															
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A															Amosite								Chrysotile			Chrysotile		
Asbestos Identification	U	2192		N/A		-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	-	Not Detected	Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Detected	-	Not Detected	-	Detected	-	Not Detected
Asbestos by Gravimetry	U	2192	%	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	-	-	-	<0.001	-	-
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		14	15	14	13	15	14	16	14	16	12	14	21	14	14	14	11	18	12	15	13	14	12	12	10	11	12	11	14
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Dark Brown	Black	Light Brown	Black	Black	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Brick	Stones	None	Stones	None	Stones	Stones
Soil Texture	N	2040		N/A																													
pH at 20C	M	2010	pH units	4		11.60	11.00	11.00	10.00	9.39	11.10	11.10	9.59	10.40	11.10	11.40	9.41	9.27	9.97	8.95	9.27	8.43	8.83	8.97	8.96	9.08	9.15	8.71	10.00	9.64	10.60	9.58	9.32
Cyanide (Total)	M	2300	mg/kg	0.5		<1	<1	<1	<1	<1	1.29	1.17	<1	<1	2.53	2.19	1.25	<1	<1	<1	<1	<1	36.10	35.90	124.00	273.00	41.70	31.50	<1	4.41	<1	2.07	1.96
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100		120000.00	102000.00	90400.00	84900.00	149000.00	119000.00	136000.00	84800.00	83300.00	209000.00	231000.00	121000.00	77600.00	83800.00	65100.00	91600.00	47800.00	274000.00	76900.00	90200.00	236000.00	22100.00	79700.00	76600.00	84600.00	111000.00	58200.00	85300.00
Arsenic	M	2450	mg/kg	1	37	6.06	7.16	5.69	4.45	4.86	8.09	9.95	6.73	6.29	15.00	13.10	8.67	11.30	9.17	<6	7.44	8.56	15.80	<6	10.10	12.60	11.00	9.56	<6	8.20	9.58	<6	9.46
Cadmium	M	2450	mg/kg	0.1	26	0.81	<0.02	0.95	<0.02	0.85	0.47	0.33	<0.02	0.73	1.86	4.03	<0.02	0.32	0.35	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.54	<0.2	<0.2	<0.2	<0.2	0.21	<0.2	<0.2
Chromium	M	2450	mg/kg	1	910	198.00	219.00	237.00	196.00	392.00	132.00	96.40	226.00	286.00	213.00	93.20	162.00	90.40	97.90	105.00	222.00	115.00	<9	142.00	70.20	32.30	35.50	52.20	66.80	70.00	213.00	91.00	49.00
Manganese	M	2450	mg/kg	5		12500.00	17200.00	13400.00	12200.00	21900.00	13000.00	13700.00	12600.00	14600.00	24300.00	18300.00	11600.00	8500.00	7320.00	7680.00	11400.00	6260.00	7720.00	6430.00	4820.00	8310.00	4410.00	4440.00	6420.00	6890.00	20300.00	3960.00	5670.00
Copper	M	2450	mg/kg	0.5	2400	18.20	23.10	14.70	13.80	11.00	15.10	18.50	15.00	14.40	22.10	23.00	19.40	22.90	23.60	33.50	21.50	25.20	36.60	24.90	27.70	30.00	20.00	33.20	<14	25.30	45.50	67.50	33.50
Mercury	M	2450	mg/kg	0.1	1.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	0.44	<0.1	<0.1	<1	<1	<1	<1	5.87	1.84	3.44	6.12	3.73	2.36	<1	<1	<1	<1	<1
Nickel	M	2450	mg/kg	0.5	1.30E+02	10.30	13.20	8.17	10.50	4.57	9.94	12.30	11.40	8.48	23.30	11.40	17.80	23.50	29.80	21.00	24.70	26.40	44.40	22.60	20.80	36.40	24.70	20.90	12.10	29.10	20.40	27.90	30.30
Lead	M	2450	mg/kg	0.5	2.00E+02	34.50	49.80	66.50	32.80	40.00	255.00	381.00	48.50	36.30	486.00	1050.00	119.00	106.00	80.90	32.70	75.70	32.60	304.00	158.00	270.00	362.00	127.00	102.00	67.70	202.00	125.00	64.10	78.00
Selenium	M	2450	mg/kg	0.2	250	3.35	4.16	5.48	3.21	5.44	2.59	1.90	5.26	6.36	10.20	<1	1.71	3.00	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13.70	<10	<10
Vanadium	U	2450	mg/kg	5	410	316.00	252.00	204.00	175.00	404.00	671.00	364.00	202.00	327.00	1180.00	857.00	398.00	157.00	217.00	236.00	251.00	304.00	129.00	114.00	72.50	172.00	79.10	131.00	115.00	78.90	503.00	105.00	137.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	174.00	213.00	260.00	141.00	122.00	901.00	1250.00	170.00	162.00	1100.00	2360.00	453.00	429.00	241.00	92.10	274.00	87.60	694.00	216.00	191.00	831.00	245.00	144.00	170.00	374.00	308.00	3020.00	172.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.04	0.02	0.01	0.02	0.02	<0.01	<0.01	0.01	<0.01	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<0.01	0.03	0.02	<0.01	<0.01	0.01	0.03	<0.01	0.01	0.07	0.02	<0.01	<0.01	<0.01	0.06	0.02	0.04	<0.01	0.10	0.08	0.02	0.07	0.03	0.01	0.02	0.02	0.01	<0.01
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	0.01	0.03	0.02	<0.01	<0.01	0.02	0.05	<0.01	0.01	0.07	0.04	<0.01	<0.01	<0.01	0.04	0.02	0.03	0.01	0.45	0.13	0.03	0.28	0.09	0.03	0.04	0.04	0.02	<0.01
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	2.30	1.47	1.79	1.72	<1	<1	<1	1.94	<1	<1	<1	<1	<1	1.13	<1	2.01	<1	16.90	7.10	<1	28.30	2.91	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	4.79	5.49	3.71	5.17	5.52	<1	<1	<1	5.61	<1	<1	1.19	<1	<1	4.20	<1	6.10	2.91	50.70	25.10	13.10	82.60	22.40	5.59	2.36	3.55	1.46	1.49
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	37.90	10.70	9.39	6.81	8.37	4.64	3.25	3.29	16.20	20.80	26.80	3.78	4.86	<1	13.80	3.88	16.40	29.80	56.90	60.80	73.90	84.10	67.00	9.96	4.87	11.20	3.72	10.60
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	44.10	36.20	29.60	25.20	44.20	21.80	12.30	5.98	41.90	59.30	49.50	16.20	33.80	10.70	22.70	24.20	29.90	15.10	71.60	37.60	31.80	81.90	44.90	95.30	27.70	35.40	18.00	27.20
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	10.20	9.55	5.38	6.01	32.60	3.91	2.68	<1	17.40	20.70	16.20	3.59	8.53	1.56	3.75	4.96	6.33	4.64	9.01	5.78	4.71	9.07	7.75	97.00	13.90	30.30	6.52	7.18
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		97.60	64.30	49.60	45.00	92.50	30.70	18.60	10.10	83.00	101.00	93.30	25.10	48.00	13.30	45.60	33.50	60.80	52.40	205.00	136.00	124.00	286.00	145.00	208.00	48.80	80.60	29.90	46.40
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<0.01	0.02	0.01	<0.01	<0.01	0.01	0.04	<0.01	<0.01	0.05	0.02	<0.01	<0.01	<0.01	0.03	0.01	0.02	0.01	0.30	0.08	0.02	0.19	0.06	0.02	0.02	0.03	0.02	<0.01
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	9.06	3.52	2.92	4.56	4.85	2.11	4.55	1.62	3.87	5.33	6.37	<1	<1	<1	<1	<1	1.25	9.41	10.10	4.40	15.30	14.00	4.91	1.02	<1	4.93	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	14.00	7.22	6.27	8.00	8.30	<1	3.39	2.22	9.58	12.80	51.60	1.51	1.94	<1	5.15	<1	8.90	160.00	36.90	11.60	84.70	50.00	8.98	13.00	<1	9.74	<1	3.88
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	66.70	26.00	30.60	51.90	52.30	12.50	33.30	17.40	53.80	161.00	550.00	4.73	14.90	18.50	11.60	6.50	15.50	526.00	27.80	15.10	345.00	35.20	31.30	27.20	5.48	63.70	5.04	21.60
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	111.00	60.70	69.40	90.60	109.00	28.90	54.60	23.60	89.00	363.00	942.00	16.40	65.30	48.30	27.10	27.60	34.30	664.00	75.90	55.90	499.00	57.10	79.70	86.80	42.10	120.00	34.00	79.70
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	10.00	3.36	5.63	6.59	6.94	2.06	3.74	2.24	6.04	68.80	150.00	<1	10.10	5.00	1.82	1.65	1.37	113.00	16.20	8.93	79.30	20.20	11.50	3.70	3.26	10.80	7.38	7.37
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		211.00	101.00	115.00	162.00	182.00	46.50	99.60	47.00	162.00	611.00	1700.00	24.10	93.10	73.10	46.30	36.40	61.40	1470.00	167.00	96.00	1020.00	176.00	136.00	132.00	51.40	210.00	46.80	113.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		308.00	165.00	164.00	207.00	274.00	77.20	118.00	57.20	245.00	712.00	1790.00	49.10	141.00	86.40	92.00	70.00	122.00	1520.00	373.00	233.00	1150.00	463.00	282.00	340.00	100.00	290.00	76.70	160.00
Organic Matter	M	2625	%	0.4		38.10	52.90	47.60	26.50	18.40	7.98	24.30	41.40	41.00	6.43	11.40	12.90	6.83	9.67	75.70	5.05	54.80	11.40	33.80	49.10	17.40	21.60	33.80	6.84	6.90	4.84	4.64	46.40
Naphthalene	M	2800	mg/kg	0.1	15	6.18	2.62	2.77	3.67	3.02	2.91	4.58	1.86	2.68	4.35	7.17	0.44	0.49	0.25	0.89	0.27	0.95	2.77	1.19	1.32	9.19	2.10	1.34	1.67	0.20	0.82	0.16	0.51
Acenaphthylene	N	2800	mg/kg	0.1	170	2.21	0.88	1.04	1.17	0.86	0.63	1.33	0.66	0.86	9.02	32.30	0.17	0.32	0.16	0.17	0.15	0.20	4.75	0.14	0.36	9.76	0.29	0.29	3.21	0.10	0.56	0.07	0.32
Acenaphthene	M	2800	mg/kg	0.1	210	0.16	0.08	0.10	0.07	0.06	0.13	0.16	0.07	0.10	0.69	2.03	0.04	0.04	0.02	0.13	0.02	0.15	0.45	0.06	0.06	0.62	0.06	0.06	0.57	0.02	0.04	0.02	0.03
Fluorene	M	2800	mg/kg	0.1	170	1.59	0.45	0.61	0.71	0.48	0.58	1.58	0.42	0.55	19.70	53.00	0.17	0.20	0.09	0.26	0.09	0.30	5.14	0.12	0.32	11.30	0.16	0.16	5.91	0.06	0.53	0.05	0.15
Phenanthrene	M	2800	mg/kg	0.1	95	11.00	4.22	5.88	7.67	5.13	4.36	8.82	3.89	4.79	89.50	226.00	1.03	1.57	0.66	1.57	0.72	1.99	17.60	0.96	1.92	34.30	0.84	1.35	25.10	0.46	2.45	0.30	1.46
Anthracene	M	2800	mg/kg	0.1	2400	3.35	1.33	1.70	2.23	1.37	1.15	5.23	0.84	1.18	42.70	86.00	0.29	0.52	0.21	0.31	0.22	0.39	<0.02	0.31	0.42	16.80	0.30	0.39	10.50	0.13	1.59	0.12	0.41
Fluoranthene	M	2800	mg/kg	0.1	280	16.70	7.54	9.41	9.61	6.77	7.08	13.90	5.48	6.75	111.00	331.00	1.68	3.56	1.58	1.88	1.70	2.92	24.50	2.01	2.95	34.30	2.06	2.78	30.90	0.94	4.01	0.60	2.99
Pyrene	M	2800	mg/kg	0.1	620	11.90	5.36	6.66	6.78	4.77	5.15	9.44	4.01	4.84	69.10	204.00	1.15	2.57	1.14	1.43	1.24	2.15	14.90	1.62	2.22	22.80	1.64	2.21	18.60	0.79	2.96	0.48	2.23
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	6.20	2.76	3.21	3.34	2.27	2.60	4.93	1.90	2.45	34.90	109.00	0.66	1.82	0.69	0.86	0.74	1.15	8.92	1.07	1.40	13.30	1.51	1.47	9.36	0.54	1.49	0.30	1.36
Chrysene	M	2800	mg/kg	0.1	15	4.76	2.49	2.71	2.85	1.92	2.36	4.27	1.61	2.02	34.60	84.60	0.66	1.55	0.68	0.88	0.63	0.92	8.60	0.94	1.24	12.10	1.46	1.30	7.28	0.60	1.24	0.29	1.36
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	7.67	3.55	3.95	4.09	2.62	3.65	6.31	2.54	3.31	39.80	121.00	0.89	2.56	0.96	1.20	1.08	1.49	10.80	1.74	2.40	15.50	2.48	2.82	9.44	0.96	1.93	0.52	2.23
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	2.29	1.05	1.24	1.43	0.84	1.06	1.59	0.86	1.04	13.60	36.50	0.28	0.84	0.30	0.40	0.33	0.44	3.24	0.56	0.70	4.02	0.77	0.81	3.56	0.32	0.64	0.14	0.69
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	4.49	2.07	2.28	2.57	1.59	2.18	3.21	1.58	1.92	24.40	71.90	0.44	1.52	0.56	0.69	0.63	0.86	6.77	1.01	1.38	9.20	1.68	1.63	6.11	0.58	1.12	0.29	1.28
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	3.77	1.84	1.95	2.26	1.34	2.04	2.57	1.23	1.82	18.60	56.70	0.38	1.39	0.43	0.49	0.51	0.60	5.22	0.84	1.15	6.84	1.49	1.41	4.08	0.44	0.81	0.25	1.13
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.73	0.31	0.37	0.42	0.25	0.30	0.59	0.27	0.30	4.28	12.00	<0.02	0.29	0.11	0.15	0.09	0.15	0.28	0.21	0.28	0.39	0.26	0.32	0.77	0.09	0.20	0.05	0.18
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	2.82	1.31	1.49	1.68	1.01	1.47	2.00	0.97	1.27	13.00	39.70	0.32	1.12	0.42	0.52	0.44	0.53	4.10	0.87	1.14	5.04	1.35	1.41	3.22	0.50	0.72	0.25	1.03
Total Of 16 PAH's	N	2800	mg/kg	2		85.90	37.80	45.40	50.50	34.30	37.60	70.50	28.20	35.90	529.00	1470.00	8.58	20.40	8.24	11.80	8.87	15.20	118.00	13.70	19.30	206.00	18.40	19.80	140.00	6.71	21.10	3.91	17.40
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	0.01	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	0.27	<0.02	<0.02	0.79	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.48	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	0.27	<0.04	<0.04	0.79	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.48	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzene	M	2760	µg/kg	1	87.00	<180	<180	<180	<1800	<180	<180	<180	<1800	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	M	2760	µg/kg	1	130000.00	<140	<140	<140	<1400	<140	<140	<140	<1400	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<80	<80	<800	<80	<80	<80	<800	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200

Results - Soil

Client: Rodgers Leask Environmental							Stockpile: R160	Stockpile: SPLJ																						
	Job No.:						210218-32	22-16661	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257
	Sample ID.:				Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)			1423057	1443178	1443179	1443180	1443181	1443182	1443183	1443184	1443185	1443981	1443982	1443983	1443984	1443985	1443986	1443987	1443988	1443989	1443990	1443991	1443992	1443993	1443994	1443995	1443194	1443195	1443196
	Client Sample Ref.:						W209B-2	R160-1	SPLJ-22	SPLJ-20	SPLJ-18	SPLJ-2	SPLJ-14	SPLJ-16	SPLJ-9	SPLJ-11	SPLJ-1	SPLJ-13	SPLJ-15	SPLJ-17	SPLJ-19	SPLJ-21	SPLJ-23	SPLJ-24	SPLJ-26	SPLJ-27	SPLJ-28	SPLJ-29	SPLJ-30	SPLJ-31	SPLJ-32	SPLJ-4	SPLJ-6	SPLJ-8
	Sample Type:						SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):						0.20-0.20		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.20	0.20
	Bottom Depth (m):																																
	Date Sampled:						17/02/2021	04/05/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022
	Asbestos Lab:							COVENTRY	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A				Chrysotile																									
Asbestos Identification	U	2192		N/A			-	Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001			-	0.01																									
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02			16	7.90	11.00	10.00	9.20	11.00	10.00	11.00	9.70	9.00	10.00	8.10	9.30	8.40	7.10	8.80	6.70	8.70	4.20	13.00	3.90	4.10	3.60	3.60	2.10	8.90	6.50	10.00
Soil Colour	N	2040		N/A			Dark Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black
Other Material	N	2040		N/A			Vegetation	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A				Sand	Clay	Clay	Clay	Clay	Clay	Clay	Loam	Loam	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Clay	Clay
pH at 20C	M	2010	pH units	4			8.93	9.50	9.40	9.30	9.70	9.40	10.00	9.00	9.10	9.20	9.50	9.50	9.60	10.10	9.50	9.50	9.70	10.10	10.00	10.00	10.40	10.20	10.40	9.20	9.30	10.00	10.20	10.10
Cyanide (Total)	M	2300	mg/kg	0.5			4.05	0.90	15.00	17.00	16.00	17.00	16.00	14.00	13.00	13.00	1.40	1.60	1.30	1.00	1.00	1.00	0.70	0.70	1.10	1.30	0.90	1.20	2.70	<0.5	0.90	12.00	14.00	14.00
Ammoniacal Nitrogen	M	2425	mg/kg	0.5			<12	2.60	2.60	3.00	2.80	2.90	2.60	4.10	4.40	3.30	5.10	5.10	4.20	3.50	4.30	4.20	3.80	3.90	3.50	3.00	3.30	3.20	2.50	2.90	4.90	2.30	2.00	1.80
Iron (Total)	N	2430	mg/kg	100			84200.00	46000.00	13000.00	16000.00	15000.00	24000.00	18000.00	13000.00	15000.00	25000.00	29000.00	28000.00	29000.00	27000.00	29000.00	27000.00	28000.00	29000.00	30000.00	29000.00	30000.00	30000.00	28000.00	22000.00	21000.00	16000.00	15000.00	16000.00
Arsenic	M	2450	mg/kg	1	37		8.55	7.70	2.30	3.10	2.90	3.70	3.80	3.00	3.10	8.00	6.30	6.50	5.60	5.40	5.80	5.20	5.80	6.50	5.70	5.80	6.20	5.40	5.40	11.00	7.50	2.90	2.80	2.40
Cadmium	M	2450	mg/kg	0.1	26		<0.2	1.10	0.26	0.30	0.40	0.27	0.37	0.31	0.43	0.43	0.37	0.40	0.37	0.42	0.29	0.31	0.33	1.80	0.31	0.32	0.33	0.31	0.51	0.42	0.33	0.33	0.31	0.31
Chromium	M	2450	mg/kg	1	910		38.20	63.00	23.00	34.00	47.00	37.00	55.00	32.00	30.00	40.00	83.00	73.00	53.00	48.00	49.00	41.00	47.00	44.00	35.00	43.00	47.00	37.00	42.00	16.00	22.00	54.00	58.00	55.00
Manganese	M	2450	mg/kg	5			8710.00	5300.00	1500.00	2000.00	1900.00	1800.00	2500.00	1800.00	1700.00	2200.00	4800.00	3700.00	2900.00	2900.00	3300.00	2600.00	3200.00	3200.00	2600.00	3400.00	3400.00	2600.00	2200.00	680.00	840.00	2400.00	2500.00	2400.00
Copper	M	2450	mg/kg	0.5	2400		24.70	19.00	11.00	13.00	12.00	14.00	13.00	13.00	13.00	21.00	17.00	21.00	15.00	15.00	14.00	14.00	16.00	17.00	14.00	16.00	17.00	14.00	19.00	16.00	21.00	14.00	12.00	11.00
Mercury	M	2450	mg/kg	0.1	1.2		<1	0.19	0.05	0.07	0.05	0.06	0.05	0.05	0.05	0.06	0.10	0.09	0.09	0.09	0.07	0.08	0.08	0.10	0.11	0.23	0.16	0.16	0.40	0.08	0.10	0.09	0.05	0.06
Nickel	M	2450	mg/kg	0.5	1.30E+02		24.50	16.00	7.00	8.00	6.70	9.70	8.50	7.30	7.50	14.00	16.00	18.00	13.00	13.00	14.00	14.00	14.00	16.00	16.00	15.00	16.00	15.00	19.00	29.00	15.00	7.20	5.90	5.30
Lead	M	2450	mg/kg	0.5	2.00E+02		71.20	240.00	50.00	44.00	34.00	38.00	35.00	38.00	55.00	54.00	51.00	53.00	46.00	53.00	53.00	43.00	47.00	53.00	45.00	54.00	54.00	60.00	66.00	23.00	54.00	39.00	39.00	38.00
Selenium	M	2450	mg/kg	0.2	250		<10	2.30	0.37	0.47	0.44	0.43	0.51	0.42	0.39	1.00	1.00	0.99	0.80	0.83	0.71	0.70	0.81	0.90	0.83	0.86	0.90	0.61	0.95	0.63	0.77	0.58	0.42	0.50
Vanadium	U	2450	mg/kg	5	410		77.90	91.00	39.00	63.00	49.00	53.00	59.00	48.00	42.00	95.00	190.00	160.00	110.00	110.00	88.00	80.00	89.00	82.00	65.00	90.00	89.00	74.00	52.00	16.00	29.00	65.00	61.00	60.00
Zinc	M	2450	mg/kg	0.5	3.70E+03		172.00	460.00	78.00	93.00	80.00	90.00	86.00	84.00	92.00	120.00	120.00	130.00	110.00	120.00	98.00	120.00	110.00	140.00	110.00	110.00	130.00	120.00	220.00	130.00	96.00	88.00	79.00	150.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	6.20	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02		<1	<1	10.00	14.00	11.00	10.00	10.00	12.00	<1	<1	<1	<1	<1	7.40	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.60	20.00	23.00	15.00
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03		2.09	<1	13.00	17.00	14.00	16.00	15.00	15.00	12.00	<1	17.00	9.10	7.40	17.00	17.00	<1	<1	2.80	5.90	<1	13.00	14.00	13.00	6.80	14.00	33.00	26.00	17.00
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04		12.90	<1	<1	13.00	5.80	13.00	7.10	15.00	<1	<1	<1	<1	<1	47.00	10.00	<1	<1	<1	<1	<1	<1	<1	8.40	19.00	<1	70.00	35.00	24.00
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04		26.00	180.00	83.00	160.00	94.00	160.00	59.00	98.00	<1	<1	<1	<1	9.50	51.00	17.00	28.00	<1	<1	<1	63.00	<1	<1	<1	28.00	<1	200.00	120.00	160.00
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04		3.98	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	75.00	<1	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5			45.00	180.00	110.00	200.00	120.00	200.00	92.00	140.00	12.00	<5	17.00	9.10	17.00	120.00	44.00	28.00	<5	<5	5.90	63.00	13.00	89.00	22.00	54.00	16.00	320.00	210.00	210.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34		<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74		<1	<1	8.80	13.00	29.00	9.30	14.00	29.00	35.00	41.00	7.30	19.00	7.00	9.90	12.00	9.70	9.50	17.00	15.00	5.10	8.40	9.40	11.00	6.10	13.00	61.00	13.00	28.00
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140		4.65	<1	32.00	10.00	55.00	6.80	3.80	18.00	31.00	42.00	3.10	12.00	<1	3.70	15.00	3.10	3.20	<1	<1	<1	2.70	39.00	6.40	<1	12.00	83.00	8.20	33.00
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260		26.90	<1	100.00	63.00	340.00	30.00	35.00	63.00	190.00	250.00	22.00	49.00	24.00	39.00	69.00	32.00	41.00	25.00	30.00	19.00	18.00	320.00	44.00	21.00	80.00	210.00	28.00	54.00
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03		91.50	<1	300.00	1200.00	880.00	210.00	140.00	230.00	200.00	340.00	79.00	130.00	63.00	130.00	190.00	96.00	94.00	60.00	83.00	94.00	17.00	800.00	90.00	150.00	190.00	620.00	250.00	280.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03		9.77	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	41.00	<1	<1	<1	6.10	7.10	9.80
Total Aromatic Hydrocarbons	M	2680	mg/kg	5			133.00	<5	440.00	1300.00	1300.00	260.00	200.00	340.00	460.00	680.00	110.00	210.00	94.00	180.00	290.00	140.00	150.00	100.00	130.00	120.00	46.00	1200.00	150.00	170.00	290.00	980.00	300.00	400.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10			178.00	180.00	540.00	1500.00	1400.00	460.00	290.00	480.00	470.00	680.00	130.00	220.00	110.00	300.00	330.00	170.00	150.00	110.00	130.00	180.00	59.00	1300.00	170.00	230.00	310.00	1300.00	510.00	610.00
Organic Matter	M	2625	%	0.4			64.10	10.00	24.00	24.00	28.00	24.00	24.00	31.00	31.00	22.00	26.00	26.00	24.00	24.00	22.00	21.00	19.00	22.00	19.00	17.00	17.00	17.00	24.00	0.98	5.30	36.00	40.00	34.00
Naphthalene	M	2800	mg/kg	0.1	15		0.44	5.60	12.00	13.00	15.00	13.00	23.00	33.00	39.00	18.00	11.00	12.00	11.00	10.00	12.00	8.50	10.00	13.00	7.00	7.60	4.90	4.50	6.20	<0.1	2.70	31.00	22.00	19.00
Acenaphthylene	N	2800	mg/kg	0.1	170		0.15	1.50	3.30	3.00	4.00	3.40	6.30	9.70	9.30	0.80	2.00	2.90	2.80	2.30	3.10	3.10	2.70	2.40	2.10	2.20	1.30	1.20	2.50	<0.1	2.70	11.00	7.10	6.90
Acenaphthene	M	2800	mg/kg	0.1	210		0.03	0.49	0.36	0.27	0.47	0.45	0.75	1.00	0.90	0.21	0.20	0.38	0.25	0.32	0.48	0.55	0.35	0.32	0.24	0.25	0.21	0.38	0.50	<0.1	0.64	1.60	0.73	1.10
Fluorene	M	2800	mg/kg	0.1	170		0.13	1.70	2.60	2.00	2.80	2.60	4.90	7.80	6.50	0.74	1.40	2.20	1.90	1.70	2.30	2.00	0.80	1.80	1.50	1.10	0.94	0.96	3.90	<0.1	3.60	8.50	4.50	5.90
Phenanthrene	M	2800	mg/kg	0.1	95		1.12	12.00	19.00	13.00	20.00	16.00	27.00	66.00	39.00	4.00	9.00	13.00	12.00	11.00	19.00	13.00	13.00	11.00	10.00	12.00	5.50	4.90	22.00	<0.1	22.00	57.00	26.00	45.00
Anthracene	M	2800	mg/kg	0.1	2400		0.30	2.50	4.90	3.60	6.10	4.60	8.40	21.00	15.00	1.10	2.90	4.00	3.80	3.30	5.50	4.10	3.80	3.10	2.50	3.50	1.30	1.20	6.20	<0.1	6.20	20.00	9.10	13.00
Fluoranthene	M	2800	mg/kg	0.1	280		1.80	20.00	33.00	21.00	31.00	23.00	37.00	100.00	70.00	5.40	16.00	19.00	19.00	17.00	34.00	26.00	21.00	16.00	19.00	20.00	9.90	7.60	33.00	<0.1	31.00	87.00	43.00	66.00
Pyrene	M	2800	mg/kg	0.1	620		1.46	15.00	23.00	15.00	22.00	16.00	27.00	73.00	52.00	3.80	11.00	14.00	14.00	12.00	23.00	20.00	14.00	11.00	14.00	15.00	7.10	5.60	22.00	<0.1	20.00	66.00	33.00	48.00
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2		0.96	8.80	13.00	8.50	11.00	9.30	15.00	38.00	27.00	2.10	6.90	8.20	8.70	7.40	14.00	13.00	8.40	7.00	8.10	8.80	4.50	3.40	16.00	<0.1	12.00	34.00	16.00	23.00
Chrysene	M	2800	mg/kg	0.1	15		1.02	8.60	14.00	8.20	9.10	9.30	14.00	37.00	27.00	2.30	6.70	7.80	8.60	7.40	14.00	13.00	8.50	6.70	8.30	8.70	4.20	3.20	16.00	<0.1	11.00	34.00	16.00	23.00
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6		1.42	13.00	17.00	10.00	14.00	12.00	17.00	45.00	35.00	3.00	8.90	11.00	11.00	9.80	18.00	18.00	11.00	9.00	12.00	13.00	6.00	5.60	23.00	<0.1	13.00	42.00	21.00	30.00
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77		0.39	4.30	6.10	4.40	5.40	4.40	6.50	17.00	12.00	0.87	2.70	3.40	3.60	3.10	5.60	5.90	3.40	3.10	3.70	3.80	1.90	1.70	7.80	<0.1	4.60	15.00	7.20	10.00
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2		0.79	9.40	14.00	8.40	11.00	9.20	15.00	37.00	29.00	2.00	7.20	8.30	9.10	7.80	13.00	14.00	8.60	7.10	8.60	9.70	4.70	4.40	19.00	<0.1	9.40	34.00	16.00	24.00
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27		0.65	6.70	11.00	6.20	8.90	7.20	9.70	29.00	19.00	1.60	5.00	6.10	6.50	5.70	9.80	10.00	6.40	5.00	7.00	7.20	3.50	3.30	13.00	<0.1	6.70	23.00	10.00	17.00
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24		0.16	1.40	1.80	1.10	0.98	0.98	1.60	4.60	3.60	0.19	1.30	1.10	1.40	1.00	2.00	2.30	1.20	0.84	1.20	1.80	0.87	0.78	3.30	<0.1	1.50	4.50	2.00	2.80
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320		0.69	5.70	7.60	6.10	6.50	6.20	7.80	22.00	17.00	1.50	4.20	5.20	5.60	5.50	8.50	9.00	5.90	4.60	6.40	7.10	3.30	3.10	11.00	<0.1	5.10	20.00	9.20	13.00
Total Of 16 PAH's	N	2800	mg/kg	2			11.50	120.00	180.00	120.00	170.00	140.00	220.00	540.00	400.00	48.00	96.00	120.00	120.00	110.00	180.00	160.00	120.00	100.00	110.00	120.00	60.00	52.00	210.00	<2	150.00	490.00	240.00	350.00
Resorcinol	M	2920	mg/kg	0.02			0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280		<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02			<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02			0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02			0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1			<0.04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00		<180	74.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00		<140	11.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00		<80	1.70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00		<200	3.90	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00		<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1			<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Results - Soil

Client: Rodgers Leask Environmental																																
Job No.:						22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
Sample ID.:						1443197	1443198	1443199	1443200	1443201	1443202	17564571	17564581	17564585	17564647	17564651	17564658	17564634	17564639	17564643	17564468	17564526	17564575	17564625	17564670	17564675	17564682	17564689	17564478	17564485	17564492	17564500	17564504
Client Sample Ref.:						SPLJ-10	SPLJ-12	SPLJ-3	SPLJ-5	SPLJ-7	SPLJ-25	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1	TP3BF1	TP3BF1	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3	TP3BF3	TP3BF3	TP3BF4	TP3BF4
Sample Type:						SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Top Depth (m):						0.20	0.20	0.20	0.20	0.20	0.20	0.50-0.50	1.00-1.00	1.50-1.50	0.50-0.50	1.20-1.20	1.80-1.80	1.00-1.00	2.00-2.00	2.20-2.20	0.50-0.50	1.00-1.00	2.00-2.00	3.00-3.00	0.50-0.50	1.00-1.00	1.80-1.80	2.30-2.30	0.50-0.50	1.00-1.00	2.00-2.00	0.50-0.50	1.00-1.00
Bottom Depth (m):																																
Date Sampled:						07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018
Asbestos Lab:							DURHAM		DURHAM		DURHAM																					
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	**Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)**																													
ACM Type	U	2192		N/A								Chrysotile (White) Asbestos															Chrysotile (White) Asbestos					
Asbestos Identification	U	2192		N/A			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	Detected	-	Not Detected	Not Detected	-	Not Detected	Not Detected	Not Detected	-	Not Detected	-	Not Detected	-	-	Not Detected	-	Detected	Not Detected	-	Not Detected	Not Detected	-
Asbestos by Gravimetry	U	2192	%	0.001								<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
Total Asbestos	U	2192	%	0.001																												
Moisture	N	2030	%	0.02		9.30	8.90	10.00	6.00	11.00	7.50	5.90	4.80	9.60	0.14	11.00	3.00	3.00	4.20	18.00	10.00	9.30	16.00	13.00	11.00	2.30	13.00	13.00	8.20	5.80	6.90	8.30	11.00
Soil Colour	N	2040		N/A		Black	Brown	Black	Brown	Brown	Brown	Dark Brown	Red	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots	None	Stones	Stones	Crushed Brick	Stones	Stones	Stones	Crushed Brick	Stones	Stones	Stones	Stones	Stones	Stones	Crushed Brick	Crushed Brick	Stones	Crushed Brick	Crushed Brick	Crushed Brick	Stones	Crushed Brick
Soil Texture	N	2040		N/A		Clay	Clay	Clay	Gravel	Loam	Loam	Sand	Sand	Sand	Sandy Loam	Sand	Sandy Loam	Sandy Loam	Loamy Sand	Sandy Clay	Sandy Loam	Sand	Sand	Sand	Sand	Loamy Sand	Loamy Sand	Sand	Loamy Sand	Loamy Sand	Loamy Sand	Sandy Loam	Sandy Loam
pH at 20C	M	2010	pH units	4		10.40	9.90	10.30	11.00	10.50	9.50	12.60	11.20	11.00	12.60	12.10	12.60	11.70	11.00	7.41	11.60	12.00	11.50	12.60	10.90	11.90	12.30	10.50	11.40	11.20	11.40	11.00	9.45
Cyanide (Total)	M	2300	mg/kg	0.5		12.00	12.00	11.00	8.80	8.20	0.85	2.62	<1	<1	<1	<1	<1	<1	<1	8.48	3.31	2.44	<1	<1	<1	1.63	<1	<1	<1	<1	<1	1.22
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		1.90	2.60	1.90	2.30	2.30	2.50	<12	<12	<12	<12	<12	<12	<12	<12	170.00	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100		25000.00	25000.00	24000.00	23000.00	21000.00	26000.00	175000.00	390000.00	211000.00	173000.00	599000.00	235000.00	168000.00	109000.00	35000.00	100000.00	63700.00	314000.00	166000.00	134000.00	166000.00	215000.00	376000.00	340000.00	170000.00	248000.00	390000.00	237000.00
Arsenic	M	2450	mg/kg	1	37	4.30	5.40	5.70	4.30	3.90	5.50	10.50	16.30	91.90	7.41	19.80	13.90	16.00	13.00	12.60	9.81	9.97	30.40	8.09	12.70	7.89	15.50	24.80	16.00	15.00	12.60	15.70	17.80
Cadmium	M	2450	mg/kg	0.1	26	0.29	0.47	0.38	0.33	0.26	0.27	<0.2	<0.2	2.31	<0.2	<0.2	1.39	<0.2	<0.2	0.13	<0.2	0.23	<0.2	<0.2	0.28	<0.2	0.27	<0.2	<0.2	<0.2	<0.2	0.21	1.42
Chromium	M	2450	mg/kg	1	910	73.00	58.00	53.00	62.00	60.00	46.00	801.00	203.00	189.00	559.00	119.00	425.00	143.00	103.00	32.10	310.00	129.00	472.00	879.00	196.00	419.00	507.00	602.00	50.40	11.00	269.00	<9	17.30
Manganese	M	2450	mg/kg	5		3100.00	3100.00	2900.00	2500.00	2600.00	2400.00	28100.00	12700.00	5340.00	47100.00	42100.00	40900.00	15100.00	6640.00	383.00	27000.00	13600.00	25500.00	38800.00	21700.00	50000.00	36100.00	45000.00	14300.00	5010.00	21600.00	6210.00	5100.00
Copper	M	2450	mg/kg	0.5	2400	14.00	19.00	15.00	15.00	12.00	16.00	17.70	<14	<14	15.70	44.20	42.70	16.30	30.20	10.50	14.50	14.30	82.20	25.40	37.20	<14	42.30	110.00	16.90	<14	24.40	22.30	24.00
Mercury	M	2450	mg/kg	0.1	1.2	0.06	0.07	0.07	0.05	<0.05	0.07	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.14	1.50	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Nickel	M	2450	mg/kg	0.5	1.30E+02	9.80	13.00	11.00	11.00	8.60	14.00	12.40	21.60	86.70	11.80	19.90	26.20	28.30	37.20	40.20	12.40	11.60	97.80	19.70	33.70	9.24	33.90	73.00	19.60	23.10	12.60	31.60	26.10
Lead	M	2450	mg/kg	0.5	2.00E+02	38.00	52.00	51.00	34.00	29.00	42.00	35.50	25.60	82.70	21.00	410.00	820.00	40.50	52.70	30.20	46.40	20.50	31.60	14.40	93.30	35.80	45.30	39.40	38.10	43.00	18.70	170.00	430.00
Selenium	M	2450	mg/kg	0.2	250	0.66	0.77	0.76	0.81	0.68	0.64	18.50	<10	<10	15.30	18.00	25.90	<10	<10	<1	18.70	11.50	14.80	36.00	15.60	30.70	19.70	25.70	<10	<10	13.00	<10	<10
Vanadium	U	2450	mg/kg	5	410	72.00	82.00	77.00	65.00	58.00	67.00	528.00	215.00	414.00	763.00	125.00	1110.00	305.00	202.00	62.50	1340.00	496.00	1110.00	1440.00	1100.00	2880.00	677.00	753.00	224.00	87.70	374.00	52.20	158.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	90.00	130.00	110.00	85.00	75.00	120.00	117.00	72.60	312.00	119.00	172.00	274.00	129.00	113.00	128.00	342.00	97.50	114.00	41.30	183.00	52.00	337.00	87.70	64.90	95.00	49.50	393.00	986.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<1	<1	<1	<1	<1	<1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	<0.04	<0.04	<0.04
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<1	<1	<1	<1	<1	<1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	0.10	<0.04	<0.04	0.06
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	11.00	<1	<1	<1	2.50	9.60	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	0.09	<0.04	0.08	<0.04	<0.04	<0.04
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	18.00	12.00	15.00	11.00	21.00	15.00	<0.04	<0.04	0.13	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.17	0.07	0.09	0.61	<0.04	<0.04	0.06	0.15	<0.04	0.05	<0.04	<0.04	<0.04
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	30.00	13.00	19.00	12.00	30.00	23.00	1.98	2.31	27.70	0.83	3.37	7.43	1.19	1.16	<0.1	20.70	14.30	5.65	1.26	11.60	<0.1	3.56	5.00	2.29	20.40	0.74	2.92	4.83
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	75.00	<1	23.00	<1	61.00	51.00	10.40	11.10	37.20	5.04	18.60	31.80	10.10	5.62	<0.1	86.70	49.10	27.20	3.17	17.50	2.88	15.60	15.60	6.27	55.70	2.70	18.80	28.40
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	200.00	2.90	68.00	8.80	170.00	160.00	71.30	74.90	60.50	64.80	145.00	167.00	83.40	36.60	<0.1	356.00	802.00	164.00	16.60	40.20	17.60	114.00	126.00	29.60	90.40	14.90	89.00	62.70
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	4.70	<1	<1	41.00	23.00	18.50	7.22	5.02	24.20	45.70	33.60	15.40	<0.1	371.00	913.00	172.00	8.40	7.62	2.11	58.50	68.90	3.43	11.50	1.41	32.30	9.53
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		340.00	27.00	130.00	32.00	290.00	300.00	107.00	107.00	133.00	75.60	191.00	252.00	128.00	58.90	<0.1	835.00	1780.00	369.00	29.50	76.90	22.60	191.00	216.00	41.60	178.00	19.80	143.00	106.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<1	<1	<1	<1	<1	<1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<1	<1	<1	<1	<1	<1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	<0.04	<0.04
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<1	<1	<1	<1	<1	7.10	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	<0.04	0.10	<0.04	<0.04	<0.04
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	59.00	15.00	17.00	7.70	62.00	28.00	<0.04	<0.04	0.09	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.11	0.05	0.06	0.41	<0.04	<0.04	<0.04	0.10	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	73.00	3.30	23.00	<1	91.00	82.00	0.68	1.09	2.65	<0.1	0.31	1.97	1.40	0.92	<0.1	20.10	17.10	7.28	1.25	26.00	1.17	2.53	2.37	2.74	41.40	1.34	4.20	20.80
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	190.00	33.00	33.00	16.00	190.00	520.00	5.93	5.91	8.02	1.86	6.58	15.80	6.69	4.19	<0.1	115.00	93.90	49.90	8.71	213.00	8.69	20.30	25.70	10.00	116.00	5.13	27.50	130.00
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	570.00	120.00	240.00	56.00	520.00	1400.00	33.00	30.50	17.50	15.50	39.70	71.90	41.20	22.00	3.30	776.00	1810.00	411.00	36.40	453.00	35.80	110.00	146.00	33.40	220.00	16.90	85.70	320.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	17.30	12.60	4.26	4.64	14.20	30.80	30.20	17.90	0.92	602.00	1580.00	321.00	16.20	92.50	12.10	46.20	52.70	11.30	52.80	5.31	28.30	80.00
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		890.00	170.00	310.00	79.00	870.00	2000.00	56.90	50.00	32.50	22.00	60.80	121.00	79.50	45.00	4.22	1510.00	3500.00	789.00	62.60	785.00	57.70	179.00	227.00	57.50	430.00	28.70	146.00	551.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		1200.00	200.00	440.00	110.00	1200.00	2300.00	164.00	157.00	165.00	97.60	251.00	372.00	208.00	104.00	4.22	2350.00	5280.00	1160.00	93.10	862.00	80.30	370.00	443.00	99.10	608.00	48.50	289.00	657.00
Organic Matter	M	2625	%	0.4		36.00	34.00	33.00	29.00	28.00	24.00	1.52	1.27	1.04	1.21	0.67	1.43	2.45	3.22	1.25	12.00	17.20	6.05	0.82	21.60	3.55	3.41	4.53	6.86	6.02	2.48	11.30	28.80
Naphthalene	M	2800	mg/kg	0.1	15	24.00	16.00	30.00	18.00	18.00	9.40	0.15	0.18	0.05	0.08	0.04	0.07	0.15	0.09	<0.01	2.00	2.34	37.40	5.23	4.05	0.59	0.72	0.40	1.37	2.88	1.08	1.21	6.57
Acenaphthylene	N	2800	mg/kg	0.1	170	6.70	4.70	8.40	4.90	5.20	3.60	0.03	0.05	<0.01	0.03	<0.01	0.02	0.03	<0.01	<0.01	1.50	1.62	51.80	4.10	2.98	0.20	0.12	0.08	0.42	0.72	0.18	0.49	2.58
Acenaphthene	M	2800	mg/kg	0.1	210	0.70	0.51	0.81	0.56	0.58	0.46	0.03	0.02	0.01	0.02	0.02	0.03	0.04	0.02	<0.01	1.90	0.87	3.31	0.19	0.15	0.05	0.17	0.16	0.04	0.09	0.05	0.04	0.14
Fluorene	M	2800	mg/kg	0.1	170	4.00	2.80	5.40	3.20	3.40	2.80	0.05	0.06	0.02	0.04	0.02	0.02	0.03	<0.01	<0.01	2.98	3.55	39.00	2.82	1.94	0.13	0.13	0.10	0.32	0.63	0.15	0.34	1.36
Phenanthrene	M	2800	mg/kg	0.1	95	20.00	17.00	29.00	17.00	19.00	19.00	0.45	0.53	0.14	0.31	0.69	0.67	0.40	0.18	<0.02	27.40	35.70	275.00	19.70	14.40	1.09	1.39	1.34	2.04	3.39	0.77	2.25	9.64
Anthracene	M	2800	mg/kg	0.1	2400	6.70	8.00	9.10	6.20	5.60	6.90	0.10	0.10	0.04	0.07	0.16	0.09	0.09	0.02	<0.02	5.70	6.69	51.30	2.42	5.06	0.32	0.36	0.32	0.50	0.89	0.17	1.11	3.45
Fluoranthene	M	2800	mg/kg	0.1	280	31.00	34.00	44.00	27.00	28.00	39.00	0.74	0.65	0.15	0.54	1.04	1.59	0.60	0.25	<0.02	32.90	38.50	269.00	18.40	32.70	2.16	2.98	3.26	2.86	3.99	0.96	6.06	22.50
Pyrene	M	2800	mg/kg	0.1	620	25.00	25.00	34.00	20.00	21.00	27.00	0.53	0.45	0.12	0.43	0.84	1.31	0.50	0.19	<0.02	23.90	26.40	195.00	13.60	24.80	1.76	2.89	3.22	2.04	2.76	0.77	4.38	16.30
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	12.00	12.00	17.00	9.90	10.00	15.00	0.32	0.24	0.05	0.29	0.38	0.69	0.32	0.10	<0.01	10.20	13.50	57.60	5.26	11.50	0.99	1.90	2.53	1.27	1.55	0.39	2.78	10.10
Chrysene	M	2800	mg/kg	0.1	15	12.00	12.00	17.00	9.80	9.90	15.00	0.43	0.30	0.05	0.34	0.42	0.75	0.35	0.11	<0.01	8.46	12.40	56.90	4.27	10.20	1.05	2.02	2.42	1.04	1.58	0.45	2.26	9.64
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	16.00	16.00	23.00	13.00	13.00	20.00	0.57	0.39	0.07	0.57	0.58	0.95	0.57	0.12	<0.02	13.30	14.40	66.00	6.61	16.00	1.46	3.07	3.24	1.51	2.13	0.55	3.17	14.70
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	5.50	5.50	7.80	4.50	4.60	7.00	0.21	0.13	0.02	0.18	0.19	0.40	0.19	0.05	<0.01	4.15	6.22	26.90	2.58	6.20	0.57	1.24	1.59	0.60	0.77	0.19	1.30	5.53
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	12.00	12.00	18.00	10.00	10.00	15.00	0.28	0.22	0.04	0.32	0.27	0.65	0.34	0.09	<0.02	9.15	13.00	56.90	5.49	9.89	1.02	2.38	3.31	1.09	1.28	0.36	2.60	9.61
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	8.50	8.30	12.00	6.70	7.20	10.00	0.24	0.17	0.02	0.33	0.19	0.45	0.22	0.06	<0.02	5.42	7.03	38.00	3.59	6.61	0.71	1.51	1.71	0.67	0.94	0.24	1.68	6.27
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	1.40	1.60	2.30	1.20	1.30	2.20	0.05	0.03	<0.02	0.07	0.06	0.13	0.06	<0.02	<0.02	1.46	1.93	10.20	0.89	1.54	0.13	0.27	0.49	0.22	0.22	0.05	0.52	1.96
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	7.10	7.30	11.00	6.20	6.20	8.60	0.23	0.17	0.03	0.31	0.23	0.57	0.26	0.09	<0.02	6.59	8.40	48.10	4.54	6.00	0.69	1.52	2.12	0.80	0.87	0.24	2.00	7.18
Total Of 16 PAH's	N	2800	mg/kg	2		190.00	180.00	270.00	160.00	160.00	200.00	4.39	3.71	0.82	3.92	5.12	8.39	4.16	1.37	<0.12	157.00	192.00	1280.00	99.60	154.00	12.90	22.70	26.30	16.80	24.70	6.61	32.20	128.00
Resorcinol	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzene	M	2760	µg/kg	1	87.00	<1	<1	<1	<1	<1	<1	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<1.8	<0.09	<0.09	<0.09	<1.8	<0.18	<0.18	<0.09	<0.18
Toluene	M	2760	µg/kg	1	130000.00	<1	<1	<1	<1	<1	<1	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<1.4	<0.07	<0.07	<0.07	<1.4	<0.14	<0.14	<0.07	<0.14
Ethylbenzene	M	2760	µg/kg	1	47000.00	<1	<1	<1	<1	<1	<1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.8	<0.04	<0.04	<0.04	<0.8	<0.08	<0.08	<0.04	<0.08
m & p-Xylene	M	2760	µg/kg	1	56000.00	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.1	<0.1	<0.1	<2	<0.2	<0.2	<0.1	<0.2
o-Xylene	M	2760	µg/kg	1	60000.00	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.1	<0.1	<0.1	<2	<0.2	<0.2	<0.1	<0.2
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<2	<0.1	<0.1	<0.1	<2	<0.2	<0.2	<0.1	<0.2

Results - Soil

						Fill Material																									
						Stockpile: W158																									
Client: Rodgers Leask Environmental	Job No.:					180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60	210129-39	210129-39	210129-39	210129-39
	Sample ID.:				Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	17564509	17564513	17564531	17564536	17564540	17564544	17564552	17564556	17564560	17564567	17564590	17564594	17564598	17564602	17564612	17564616	17564620	17564663	17564474	17564496	17564521	17564548	17564608	17564630				
	Client Sample Ref.:					TP3BF4	TP3BF4	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V	TP3BF2-V	TP3BF3-V	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V	AH29-1	AH29-2	AH30-1	AH30-2
	Sample Type:					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	Top Depth (m):					2.00-2.00	2.50-2.50	0.50-0.50	1.00-1.00	1.50-1.50	2.00-2.00	0.30-0.30	0.70-0.70	1.00-1.00	1.50-1.50	0.50-0.50	1.20-1.20	1.70-1.70	2.30-2.30	0.50-0.50	1.00-1.00	1.50-1.50	3.10-3.10	2.70-2.70	2.20-2.20	2.70-2.70	2.40-2.40	2.70-2.70	2.00-2.00	0.30-0.30	1.60-1.60	0.20-0.20	1.40-1.40
	Bottom Depth (m):																																
	Date Sampled:					5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	5/15/2018	28/01/2021	28/01/2021	28/01/2021	28/01/2021
	Asbestos Lab:																																
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A																													
Asbestos Identification	U	2192		N/A		Not Detected	-	-	Not Detected	-	Not Detected	Not Detected	-	Not Detected	-	-	Not Detected	-	Not Detected	Not Detected	-	Not Detected	-	-	-	-	-	-	-	-	Not Detected	-	Not Detected
Asbestos by Gravimetry	U	2192	%	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		10.00	27.00	9.10	5.70	16.00	9.80	3.90	6.90	13.00	9.90	5.10	8.30	9.90	10.00	8.50	8.60	12.00	34.00	31.00	26.00	29.00	24.00	22.00	29.00	13	11	15	11
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Red	Dark Brown	Dark Brown	Dark Brown	Red	Red	Light Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Grey	Black	Dark Brown	Grey	Dark Brown	Grey	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Crushed Brick	Stones	Stones	Stones	Stones	Stones	Stones	Crushed Brick	None	None	Stones	None	None	None	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A		Loamy Sand	Silt Loam	Sand	Sand	Stone/Soil	Loamy Sand	Sand	Sand	Loamy Sand	Sandy Loam	Sand	Sand	Sand	Sand	Sand	Sand	Loamy Sand	Silty Clay Loam	Clay	Sandy Clay	Silty Clay Loam	Sandy Clay	Clay	Sandy Clay Loam	Loamy Sand	Sand	Sandy Clay	Sand
pH at 20C	M	2010	pH units	4		10.80	11.00	10.60	10.90	11.10	10.80	11.80	11.90	8.77	9.00	12.70	12.30	11.40	11.50	11.30	10.80	7.72	7.50	7.65	7.83	7.55	7.96	7.37	7.30	10.60	11.50	8.63	9.70
Cyanide (Total)	M	2300	mg/kg	0.5		2.90	7.85	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.00	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	37.50	376.00	341.00	311.00	172.00	119.00	178.00	290.00	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100		207000.00	618000.00	153000.00	83900.00	114000.00	281000.00	187000.00	296000.00	265000.00	197000.00	212000.00	244000.00	183000.00	138000.00	126000.00	99600.00	47800.00	28700.00	0.00	39000.00	41000.00	36300.00	33700.00	30400.00	151000.00	169000.00	27800.00	397000.00
Arsenic	M	2450	mg/kg	1	37	20.40	32.10	14.70	6.12	10.20	35.90	9.39	15.10	125.00	92.30	10.10	15.30	22.00	12.10	17.00	11.80	12.40	14.30	12.10	10.20	14.60	13.70	12.10	12.30	8.79	6.58	10.30	65.00
Cadmium	M	2450	mg/kg	0.1	26	3.53	8.97	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.28	0.16	0.38	<0.02	<0.02	<0.02	<0.02	0.14	1.77	1.52	0.42	4.47
Chromium	M	2450	mg/kg	1	910	<9	<9	174.00	204.00	108.00	219.00	581.00	170.00	388.00	217.00	498.00	261.00	42.20	264.00	168.00	55.40	24.90	38.90	26.90	34.20	32.40	28.80	31.90	34.70	158.00	615.00	23.40	397.00
Manganese	M	2450	mg/kg	5		5560.00	11600.00	11400.00	17800.00	13700.00	18400.00	23700.00	11200.00	11700.00	4560.00	24200.00	24300.00	8580.00	23100.00	10400.00	6760.00	2240.00	437.00	0.00	746.00	777.00	955.00	391.00	243.00	10900.00	38400.00	1180.00	34200.00
Copper	M	2450	mg/kg	0.5	2400	19.50	37.20	17.90	<14	<14	20.40	<14	<14	<14	<14	<14	14.10	29.90	15.80	<14	18.60	21.50	18.00	<14	13.40	20.30	12.10	12.80	15.70	34.50	15.10	19.20	220.00
Mercury	M	2450	mg/kg	0.1	1.2	<1.4	1.65	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.14	<1.4	<0.14	<0.14	<0.14	<0.14	<0.14	<1.4	<1.4	<1.4	<1.4
Nickel	M	2450	mg/kg	0.5	1.30E+02	22.10	35.70	41.80	6.10	16.80	40.90	8.34	14.60	119.00	92.20	14.30	18.30	28.90	20.80	22.60	13.90	40.40	27.30	23.90	40.50	38.30	41.60	35.00	26.90	23.60	12.90	24.10	168.00
Lead	M	2450	mg/kg	0.5	2.00E+02	952.00	2280.00	63.70	8.37	61.40	93.30	15.90	23.70	23.60	37.10	25.70	39.00	45.20	29.90	24.40	30.20	58.90	38.80	29.90	27.40	33.80	27.60	26.30	31.10	58.10	24.80	27.50	95.30
Selenium	M	2450	mg/kg	0.2	250	<10	<10	<10	13.60	<10	11.70	15.50	<10	<10	<10	15.60	15.10	<10	14.90	<10	<10	<10	1.03	<10	<1	<1	<1	<1	<1	<10	18.00	<10	<10
Vanadium	U	2450	mg/kg	5	410	67.40	198.00	196.00	201.00	192.00	279.00	436.00	192.00	639.00	436.00	654.00	742.00	130.00	449.00	230.00	125.00	40.30	74.00	45.30	63.10	63.40	59.50	61.20	60.90	216.00	483.00	28.70	469.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	2210.00	5280.00	180.00	31.60	177.00	254.00	44.30	55.50	246.00	193.00	138.00	94.40	122.00	65.30	77.70	105.00	157.00	137.00	90.70	125.00	146.00	118.00	105.00	122.00	204.00	72.40	135.00	514.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	0.04	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.10	0.12	<0.04	<0.04	<0.04	<0.04	<0.04	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	0.35	0.92	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	2.64	<0.1	1.51	<0.1	0.52	1.10	1.23	2.08	4.15	4.66	1.78	5.74	2.84	2.09	1.74	2.13	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	19.30	8.39	10.90	1.45	9.52	16.60	6.37	8.88	18.60	13.30	9.13	13.00	5.37	4.86	7.63	10.50	2.23	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.88	10.30	<1	1.43
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	44.40	28.50	138.00	11.50	42.60	79.80	47.40	71.30	123.00	78.50	77.30	54.10	19.90	20.40	52.50	66.90	11.40	2.63	5.06	<0.1	<0.1	<0.1	<0.1	<0.1	15.80	35.50	<1	5.63
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	7.13	1.93	48.40	2.97	11.90	24.40	13.30	13.70	11.60	12.30	11.10	7.35	3.66	2.67	19.40	31.60	2.81	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.14	13.60	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		73.50	38.80	199.00	15.90	64.50	122.00	68.30	95.90	158.00	109.00	99.20	80.20	31.80	30.00	81.30	111.00	16.50	2.63	5.06	<0.1	<0.1	<0.1	<0.1	<0.1	25.60	63.20	<5	7.53
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.07	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.01	<0.01	<0.01	<0.01
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.24	0.61	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	3.30	<0.1	1.80	<0.1	1.26	1.16	0.94	2.13	<0.1	1.33	0.89	0.89	0.97	<0.1	0.40	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	26.40	6.62	15.80	1.42	10.00	11.70	8.26	13.60	5.20	4.56	10.40	5.14	2.51	2.63	3.45	3.01	1.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	5.24	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	53.40	13.40	85.60	4.39	31.10	41.20	38.60	59.10	45.40	29.50	41.40	32.30	10.30	11.90	23.40	28.80	8.83	15.80	17.20	2.82	8.00	3.17	<0.1	8.84	17.20	26.80	<1	5.66
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	10.10	0.96	54.60	1.04	12.40	23.50	11.70	15.00	3.97	7.96	13.80	11.00	3.30	2.14	18.00	33.50	7.61	2.10	1.61	<0.1	0.62	0.52	<0.1	1.02	1.95	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		93.20	21.00	158.00	6.86	54.80	77.60	59.50	89.90	54.60	43.40	66.50	49.30	17.10	16.70	45.20	65.30	17.60	17.90	18.90	2.82	8.62	3.69	<0.1	9.87	25.00	35.60	<5	7.51
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		167.00	59.80	357.00	22.80	119.00	199.00	128.00	186.00	213.00	154.00	166.00	129.00	48.80	46.70	126.00	177.00	34.10	20.50	23.90	2.82	8.62	3.69	<0.1	9.87	50.60	98.80	<10	15.00
Organic Matter	M	2625	%	0.4		12.60	14.40	3.67	0.66	2.95	12.20	2.45	2.43	0.47	0.54	1.07	0.35	1.78	1.84	0.99	2.02	1.38	5.31	4.41	1.33	2.84	1.16	2.24	4.14	13.80	13.80	1.28	7.60
Naphthalene	M	2800	mg/kg	0.1	15	0.43	0.31	0.34	0.10	1.29	0.33	0.15	0.33	<0.01	0.01	0.11	0.17	0.05	0.04	0.03	0.05	0.01	<0.01	<0.01	0.02	0.28	<0.01	<0.01	<0.01	0.20	0.18	0.01	0.04
Acenaphthylene	N	2800	mg/kg	0.1	170	0.12	0.03	0.12	0.03	0.63	0.09	0.04	0.07	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.05	<0.01	0.03
Acenaphthene	M	2800	mg/kg	0.1	210	0.04	0.04	0.04	<0.01	0.13	<0.04	0.05	0.15	<0.01	<0.01	0.03	0.04	<0.01	<0.01	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.06	<0.01	<0.01
Fluorene	M	2800	mg/kg	0.1	170	0.16	0.16	0.08	0.03	0.68	0.07	0.05	0.14	<0.01	<0.01	0.04	0.03	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	0.05	<0.01	<0.01
Phenanthrene	M	2800	mg/kg	0.1	95	1.65	0.74	0.61	0.14	3.51	0.48	0.67	1.33	0.02	0.05	0.47	0.42	0.12	0.08	0.10	0.13	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.51	0.36	0.09	0.05
Anthracene	M	2800	mg/kg	0.1	2400	0.43	0.21	0.20	0.04	0.97	0.15	0.14	0.26	<0.02	<0.02	0.09	0.10	0.03	0.02	0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.16	0.09	0.03	<0.02
Fluoranthene	M	2800	mg/kg	0.1	280	2.78	0.63	1.09	0.24	4.38	0.73	1.14	1.79	0.03	0.08	0.97	0.87	0.19	0.12	0.16	0.17	0.08	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	1.03	0.59	0.17	0.08
Pyrene	M	2800	mg/kg	0.1	620	2.20	0.76	0.90	0.19	3.15	0.60	1.00	1.58	0.03	0.07	0.83	0.79	0.17	0.09	0.15	0.15	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.83	0.52	0.13	0.07
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	1.32	0.14	0.54	0.11	1.62	0.34	0.55	1.00	0.02	0.05	0.50	0.47	0.10	0.05	0.08	0.10	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.61	0.32	0.08	0.05
Chrysene	M	2800	mg/kg	0.1	15	1.26	0.13	0.64	0.12	1.73	0.44	0.70	1.17	0.02	0.04	0.62	0.58	0.10	0.06	0.09	0.09	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.67	0.33	0.09	0.06
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	1.57	0.17	0.94	0.18	2.17	0.59	0.82	1.30	0.02	0.05	0.93	0.83	0.18	0.10	0.13	0.15	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.10	0.54	0.12	0.09
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.48	0.05	0.30	0.06	0.80	0.21	0.27	0.54	<0.01	0.02	0.39	0.33	0.06	0.03	0.05	0.05	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.31	0.19	0.04	0.03
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.95	0.10	0.60	0.10	1.46	0.32	0.52	0.93	<0.02	0.04	0.55	0.49	0.10	0.05	0.09	0.09	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.60	0.33	0.07	0.06
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	0.74	0.05	0.46	0.09	1.03	0.24	0.35	0.59	<0.02	0.02	0.44	0.40	0.07	0.03	0.07	0.06	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.52	0.32	0.06	0.07
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.14	<0.02	0.10	<0.02	0.21	<0.12	0.09	0.12	<0.02	<0.02	0.08	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.12	0.05	<0.02	<0.02
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	0.54	0.07	0.47	0.08	1.02	0.25	0.37	0.61	<0.02	0.03	0.45	0.42	0.08	0.05	0.10	0.08	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.50	0.27	0.06	0.07
Total Of 16 PAH's	N	2800	mg/kg	2		14.80	3.58	7.43	1.49	24.80	4.82	6.91	11.90	0.13	0.46	6.51	6.03	1.22	0.72	1.11	1.19	0.45	<0.12	<0.12	<0.12	0.28	<0.12	<0.12	<0.12	7.36	4.24	0.96	0.69
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzene	M	2760	µg/kg	1	87.00	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<180	<180	<180	<180
Toluene	M	2760	µg/kg	1	130000.00	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07	<140	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<80	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<200	<200	<200	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<200	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<200	<200	<200	<200

Results - Soil

Client: Rodgers Leask Environmental						Job No.:		210129-39	210129-39	210129-39	210129-39	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210202-91	210202-91	210202-91	210202-91	210202-91
						Sample ID.:	Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	AH31-1	AH31-2	AI31-1	AI31-2	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1	AL28-1	AL28-2	AL29-1	AL30-1	AL30-2	AL31-1	AL31-2	AL33-1	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1
						Client Sample Ref.:		SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
						Sample Type:		0.50-0.50	1.70-1.70	0.50-0.50	1.50-1.50	0.70-0.70	1.50-1.50	0.40-0.40	1.50-1.50	0.80-0.80	1.00-1.00	0.20-0.20	1.00-1.00	0.10-0.10	1.10-1.10	1.00-1.00	0.50-0.50	1.20-1.20	0.80-0.80	0.50-0.50	2.00-2.00	0.50-0.50	1.50-1.50	0.80-0.80	0.30-0.30	1.30-1.30	0.50-0.50	1.20-1.20	0.50-0.50
						Top Depth (m):																											
						Bottom Depth (m):																											
						Date Sampled:		28/01/2021	28/01/2021	28/01/2021	28/01/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021	1/29/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021	1/29/2021	1/29/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021	1/29/2021	1/29/2021	1/29/2021	1/29/2021	1/29/2021
						Asbestos Lab:																											
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A																													
Asbestos Identification	U	2192		N/A			-	Not Detected	-	Not Detected	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	-	-	Not Detected	Not Detected	Not Detected	-	Not Detected	-	-	Not Detected	-	Not Detected	-	Not Detected
Asbestos by Gravimetry	U	2192	%	0.001																													
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02			9.8	12	12	14	1.4	10	13	20	17	7.5	12	13	11	23	16	6.9	6.9	9.3	12	9.3	21	12	11	6.7	9.4	14	13	12
Soil Colour	N	2040		N/A			Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Grey	Dark Brown	Grey	Dark Brown	Black	Black	Dark Brown	Dark Brown	Dark Brown	Grey	Grey	Grey	Dark Brown	Dark Brown	Dark Brown	Light Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A			Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Brick	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A			Sandy Loam	Sandy Loam	Sandy Loam	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sandy Loam	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Stone/Soil	Loamy Sand	Sand	Sandy Clay	Loamy Sand	Loamy Sand
pH at 20C	M	2010	pH units	4			9.75	10.50	11.30	11.20	9.91	9.58	8.83	9.57	12.10	12.00	9.22	11.30	10.50	10.80	11.40	12.50	12.40	11.50	10.60	11.90	10.60	9.10	11.90	10.20	9.22	8.84	10.30	11.30
Cyanide (Total)	M	2300	mg/kg	0.5			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.02	<1	<1	<1	<1	<1	<1	<1	<1	4.21	5.06
Ammoniacal Nitrogen	M	2425	mg/kg	0.5			<12	<12	<12	<12	<12	<12	<12	18.60	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100			40900.00	40600.00	119000.00	137000.00	338000.00	0.00	49600.00	0.00	49900.00	152000.00	58900.00	54800.00	230000.00	0.00	0.00	0.00	163000.00	166000.00	90000.00	144000.00	95800.00	32100.00	0.00	98000.00	15600.00	30300.00	43300.00	220000.00
Arsenic	M	2450	mg/kg	1	37		9.28	7.60	8.19	7.92	14.20	9.37	7.95	11.50	<6	<6	7.22	11.20	10.30	6.83	6.44	<6	<6	<6	8.72	<6	<6	11.40	7.73	<6	61.50	11.80	<6	12.20
Cadmium	M	2450	mg/kg	0.1	26		0.90	0.63	1.98	2.13	2.29	1.51	0.92	0.63	0.47	1.27	0.77	1.47	2.19	0.45	0.96	1.09	1.19	1.42	1.22	1.45	1.11	0.66	1.01	0.39	1.72	0.35	0.44	1.04
Chromium	M	2450	mg/kg	1	910		52.90	39.10	145.00	159.00	<9	<9	17.80	30.60	205.00	723.00	21.90	222.00	142.00	15.30	265.00	1080.00	936.00	836.00	235.00	653.00	68.50	25.30	1170.00	132.00	11.60	14.40	31.00	<9
Manganese	M	2450	mg/kg	5			3580.00	3130.00	18700.00	12800.00	4850.00	2970.00	1360.00	1360.00	14900.00	34000.00	1710.00	8170.00	5740.00	1150.00	3190.00	48700.00	48700.00	43500.00	11800.00	35700.00	11400.00	1690.00	16300.00	8510.00	2030.00	1050.00	5120.00	4060.00
Copper	M	2450	mg/kg	0.5	2400		20.50	27.70	18.40	15.00	23.50	14.50	34.60	31.30	<14	37.90	<14	40.90	36.50	21.70	16.40	14.30	<14	23.30	19.20	15.30	<14	24.00	53.30	15.90	11.00	16.70	<14	20.70
Mercury	M	2450	mg/kg	0.1	1.2		<1.4	<1.4	<1.4	<1.4	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<1	5.69
Nickel	M	2450	mg/kg	0.5	1.30E+02		17.50	19.50	16.40	14.70	36.90	21.70	17.50	33.30	4.61	13.10	24.30	26.30	37.20	11.30	14.40	5.25	5.37	9.39	23.60	5.78	22.80	26.60	496.00	23.00	8.83	24.30	10.80	36.90
Lead	M	2450	mg/kg	0.5	2.00E+02		48.90	33.00	152.00	147.00	39.70	24.70	52.80	47.60	39.60	137.00	44.30	60.40	46.70	57.20	34.20	22.40	23.50	100.00	90.00	<7	23.30	19.80	26.80	43.10	80.10	32.40	76.30	382.00
Selenium	M	2450	mg/kg	0.2	250		<10	<10	12.40	<10	<10	<10	<10	<10	13.40	23.30	<10	<10	<10	<10	<10	30.60	31.20	29.50	10.20	19.70	<10	<10	10.40	<10	1.71	<1	<10	<10
Vanadium	U	2450	mg/kg	5	410		96.80	89.80	422.00	310.00	49.60	36.40	34.80	43.00	244.00	543.00	32.70	285.00	97.30	26.00	233.00	840.00	709.00	684.00	218.00	544.00	94.30	40.10	255.00	70.40	34.00	26.40	38.50	280.00
Zinc	M	2450	mg/kg	0.5	3.70E+03		124.00	90.60	459.00	415.00	131.00	80.80	70.30	86.90	42.90	94.10	77.60	265.00	109.00	75.30	68.40	40.60	57.30	123.00	198.00	39.50	81.30	64.90	70.70	131.00	573.00	117.00	237.00	641.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42		<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100		<0.01	<0.01	<0.01	0.04	<0.01	<0.01	0.02	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27		<0.01	<0.01	<0.01	0.06	<0.01	0.02	0.04	0.02	<0.01	<0.01	<0.01	0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03		<1	<1	<1	4.06	<1	<1	10.40	<1	7.39	2.78	<1	2.16	<1	4.91	1.96	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04		1.34	2.52	2.30	6.40	1.10	<1	20.90	6.19	26.30	14.80	<1	4.49	10.40	15.30	18.80	<1	1.39	12.60	3.81	3.08	2.50	1.15	<1	1.11	<1	<1	27.60	4.25
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04		5.35	7.93	13.30	20.30	5.09	1.41	27.10	18.60	66.60	54.90	2.72	1.94	16.70	22.70	12.10	12.30	11.80	44.50	19.70	10.50	22.60	5.00	4.26	2.41	<1	<1	1010.00	12.60
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04		<1	<1	4.06	7.87	<1	<1	4.98	5.25	11.20	13.60	1.09	<1	<1	1.93	<1	1.68	1.51	12.20	8.16	1.46	30.70	<1	<1	<1	<1	<1	1330.00	1.87
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5			7.14	10.60	19.70	39.00	6.74	<5	63.90	31.00	112.00	86.20	<5	31.50	8.98	32.00	45.20	33.90	14.90	15.00	70.20	32.10	15.30	56.40	6.50	5.54	<5	<5	<5	2370.00	19.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34		<0.01	<0.01	<0.01	0.04	<0.01	0.01	0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140		<1	<1	<1	2.30	<1	<1	1.02	<1	<1	<1	<1	<1	<1	1.03	2.32	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260		2.91	3.46	7.64	14.00	<1	<1	4.73	1.87	1.52	<1	1.42	1.99	6.63	6.51	32.20	<1	<1	1.57	6.39	<1	4.87	<1	<1	2.26	3.77	<1	18.80	4.96
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03		24.40	30.40	28.30	34.10	<1	<1	28.80	16.40	8.94	6.37	12.30	18.50	23.40	13.20	110.00	<1	1.96	11.40	29.00	3.36	45.40	1.45	3.80	43.20	3.67	<1	930.00	21.40
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03		4.08	5.83	1.30	2.99	<1	<1	2.34	1.03	<1	<1	5.14	10.90	<1	<1	11.10	<1	<1	<1	2.25	<1	4.00	<1	<1	12.60	<1	<1	85.30	3.54
Total Aromatic Hydrocarbons	M	2680	mg/kg	5			31.60	39.90	37.80	53.90	<5	<5	36.90	19.80	11.70	7.99	18.90	31.80	35.50	21.80	156.00	<5	<5	14.40	38.40	<5	55.20	<5	5.32	58.10	8.50	<5	1030.00	30.50
Total Petroleum Hydrocarbons	N	2680	mg/kg	10			38.70	50.60	57.50	93.00	<10	<10	101.00	50.90	123.00	94.20	18.90	40.80	67.60	67.00	190.00	14.90	15.00	84.60	70.50	15.30	112.00	<10	10.90	58.10	<10	<10	3400.00	49.50
Organic Matter	M	2625	%	0.4			11.30	6.91	12.80	10.70	3.95	4.22	100.00	22.90	1.81	2.60	12.10	38.40	17.20	0.00	31.50	<0.35	3.31	6.14	20.50	21.20	54.50	3.33	1.62	5.07	2.09	2.09	11.10	37.40
Naphthalene	M	2800	mg/kg	0.1	15		0.13	0.06	0.40	0.75	<0.01	<0.01	0.11	0.12	0.14	0.02	0.03	0.03	0.57	0.13	0.55	<0.01	0.02	0.14	0.19	0.05	0.14	0.01	0.07	0.22	0.01	<0.01	<0.01	0.23
Acenaphthylene	N	2800	mg/kg	0.1	170		0.10	0.08	0.22	0.52	<0.01	<0.01	0.17	0.19	0.06	<0.01	0.10	0.03	0.67	0.06	0.93	<0.01	<0.01	0.05	0.16	0.06	0.06	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.09
Acenaphthene	M	2800	mg/kg	0.1	210		0.01	0.01	0.05	0.10	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	0.01	0.06	<0.01	<0.01	0.02	0.04	<0.01	0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	0.02
Fluorene	M	2800	mg/kg	0.1	170		0.06	0.02	0.17	0.66	<0.01	<0.01	0.03	0.06	0.03	<0.01	<0.01	0.02	1.05	0.09	0.56	<0.01	0.01	0.05	0.14	0.03	0.04	<0.01	0.01	<0.01	0.08	<0.01	<0.01	0.06
Phenanthrene	M	2800	mg/kg	0.1	95		0.77	0.19	1.59	3.70	0.04	0.02	0.23	0.35	0.31	0.10	0.13	0.15	6.25	0.84	3.77	0.02	0.11	0.41	0.94	0.41	0.39	0.03	0.11	0.54	1.45	0.05	4.16	0.56
Anthracene	M	2800	mg/kg	0.1	2400		0.15	0.07	0.49	0.82	<0.02	<0.02	0.07	0.10	0.08	0.02	0.05	0.03	2.26	0.27	1.44	<0.02	0.04	0.10	0.30	0.13	0.10	<0.02	0.03	<0.02	0.29	0.02	<0.02	0.15
Fluoranthene	M	2800	mg/kg	0.1	280		1.25	0.52	2.88	4.86	0.06	0.03	0.96	0.87	0.60	0.34	0.51	0.23	7.65	0.89	11.20	0.05	0.18	0.78	1.82	0.67	0.70	0.04	0.21	1.12	1.72	0.14	4.72	1.20
Pyrene	M	2800	mg/kg	0.1	620		0.90	0.37	2.14	3.51	0.05	0.03	0.89	0.73	0.46	0.32	0.42	0.17	5.15	0.66	9.49	0.05	0.14	0.58	1.33	0.50	0.53	0.03	0.16	0.86	1.24	0.12	3.89	0.97
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2		0.56	0.29	1.31	2.05	0.03	0.03	0.73	0.48	0.33	0.18	0.32	0.12	2.72	0.56	4.80	0.02	0.09	0.31	0.86	0.26	0.41	0.02	0.13	0.58	0.60	0.09	1.71	0.67
Chrysene	M	2800	mg/kg	0.1	15		0.53	0.27	1.19	2.07	0.03	0.04	0.56	0.51	0.39	0.20	0.32	0.12	2.22	0.57	4.92	0.03	0.10	0.31	0.84	0.27	0.39	0.03	0.14	0.46	0.50	0.09	2.28	0.71
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6		0.81	0.45	1.91	2.78	0.04	0.06	1.45	0.94	0.59	0.30	0.68	0.18	3.19	0.77	7.25	0.05	0.13	0.47	1.20	0.34	0.53	0.04	0.25	0.86	0.46	0.11	2.54	0.98
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77		0.26	0.15	0.64	0.84	<0.01	0.02	0.43	0.28	0.18	0.11	0.23	0.05	0.98	0.24	1.71	0.02	0.05	0.14	0.38	0.10	0.18	<0.01	0.07	<0.01	0.16	0.03	<0.01	0.30
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2		0.49	0.30	1.22	1.64	0.02	0.04	1.06	0.57	0.33	0.19	0.43	0.11	2.00	0.54	4.08	<15	0.08	0.26	0.69	0.20	0.38	0.02	0.15	0.48	0.26	0.07	1.22	0.57
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27		0.46	0.32	1.12	1.29	0.02	0.04	0.97	0.57	0.32	0.20	0.47	0.09	1.85	0.38	4.21	0.02	0.07	0.27	0.59	0.18	0.29	<0.02	0.18	0.41	0.14	0.04	1.31	0.43
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24		0.09	0.07	0.22	0.27	<0.02	<0.02	0.16	0.11	0.07	0.03	0.09	<0.02	0.32	0.10	0.69	<0.02	<0.02	0.05	0.13	0.04	0.06	<0.02	0.03	<0.02	0.04	<0.02	<0.02	0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320		0.41	0.28	0.96	1.19	<0.02	0.04	0.86	0.52	0.30	0.16	0.41	0.09	1.32	0.36	3.36	<0.02	0.07	0.21	0.55	0.18	0.26	<0.02	0.14	<0.02	0.13	0.04	<0.02	0.40
Total Of 16 PAH's	N	2800	mg/kg	2			7.00	3.45	16.50	27.00	0.30	0.34	8.70	6.40	4.21	2.16	4.17	1.40	38.20	6.46	59.00	0.27	1.08	4.13	10.20	3.39	4.48	0.22	1.72	5.52	7.13	0.80	21.80	7.43
Resorcinol	M	2920	mg/kg	0.02			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280		<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.02			<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.02			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1			<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Benzene	M	2760	µg/kg	1	87.00		<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	M	2760	µg/kg	1	130000.00		<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00		<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	M	2760	µg/kg	1	60000.00		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1			<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200

Results - Soil

Client: Rodgers Leask Environmental	Job No.:					210202-91	210202-91	210202-91	21-41336	22-16145	22-16145	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-18735	22-18735	22-18735	22-18735	22-18735	21-41336	22-14900	210114-154	210114-154	210114-154	22-14900	22-14900	22-16145	22-16145	22-16145	22-14900
	Sample ID.:								1326719	1420842	1420843	1459500	1459501	1459502	1459503	1459504	1459505	1432301	1432302	1432303	1432304	1432307	1326714	1415349				1415358	1415359	1420844	1420845	1420846	1415356
	Client Sample Ref.:				Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	AK22-2	AL21-1	AL21-2	AM29-1	AM29-1	AM29-2	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2	AO25-1	AP25-1	AP26-1	AQ26-1	AQ28-1	AQ30-1	AQ27-1	AP21-1	AP21-2	AP21-3	AP22-1	AP22-2	AP30-1	AP30-2	AP31-1	AQ22-1
	Sample Type:					SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					1.60-1.60	0.50-0.50	1.40-1.40	1.2	0.5	1.5	0.5	1.5	0.3	1.3	0.3	1.0	1.00	1.70	1.70	1.80	1.60	0.6	0.4	0.30-0.30	1.90-1.90	2.40-2.40	0.5	1.5	0.7	1.7	1.5	0.3
	Bottom Depth (m):					-	-	-	-	0.5	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	1.7	1.5	
	Date Sampled:					1/29/2021	1/29/2021	1/29/2021	19/11/2021	28/04/2022	28/04/2022	29/06/2022	29/06/2022	29/06/2022	29/06/2022	29/06/2022	29/06/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022	18/05/2022	19/11/2021	20/04/2022	11/01/2021	11/01/2021	11/01/2021	20/04/2022	20/04/2022	28/04/2022	28/04/2022	28/04/2022	20/04/2022
	Asbestos Lab:										NEW-ASB		DURHAM			DURHAM			DURHAM		DURHAM		COVENTRY						NEW-ASB		NEW-ASB	NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A			Chrysotile		-		-		-		-		-		-		-				Chrysotile			-		-	-	
Asbestos Identification	U	2192		N/A		-	Detected	-	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected				-	Detected	-		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001			0.020																		-	0.007	-						
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		15	20	11	12.00	8.70	14.00	5.80	5.10	9.40	2.60	1.40	10.00	8.30	6.90	10.00	7.40	9.10	10.00	10.00	10.00	8.10	20.00	10.00	14.00	8.60	5.30	7.10	6.40
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Black	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Dark Brown	Dark Brown	Dark Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones
Soil Texture	N	2040		N/A		Silty Sand	Loamy Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Gravel				Gravel	Loam	Sand	Sand	Sand	Gravel
pH at 20C	M	2010	pH units	4		11.60	8.81	9.39	> 12.0	11.10	10.70	11.00	9.50	11.10	10.30	8.90	10.00	> 12.0	9.40	11.80	9.20	9.00	12.00	11.00	9.83	9.93	9.49	10.40	10.40	> 12.0	10.20	11.50	10.70
Cyanide (Total)	M	2300	mg/kg	0.5		1.73	3.41	2.09	1.50	1.40	0.90	0.50	0.90	0.90	1.10	1.60	1.70	0.90	8.30	1.40	<0.5	<0.5	1.20	<0.5	<1	3.93	1.16	1.00	1.30	2.70	<0.5	<0.5	<0.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<0.5	<0.5	<0.5	1.50	0.93	3.90	0.68	0.86	1.60	0.58	28.00	1.40	5.40	0.86	<0.5	8.60	<12	<12	74.10	10.00	5.30	<0.5	<0.5	<0.5	6.90
Iron (Total)	N	2430	mg/kg	100		76400.00	109000.00	18500.00	22000.00	38000.00	31000.00	29000.00	28000.00	30000.00	11000.00	32000.00	28000.00	77000.00	100000.00	73000.00	54000.00	26000.00	23000.00	12000.00	305000.00	374000.00	82600.00	15000.00	14000.00	41000.00	15000.00	46000.00	16000.00
Arsenic	M	2450	mg/kg	1	37	7.92	10.20	<6	23.00	4.20	3.40	8.90	1.80	6.30	1.50	7.30	6.40	2.70	7.90	4.40	4.00	2.20	17.00	4.60	6.21	35.70	16.90	5.40	4.80	5.60	11.00	8.80	4.70
Cadmium	M	2450	mg/kg	0.1	26	0.52	1.89	<0.2	<0.1	0.36	<0.1	0.19	0.20	0.27	0.23	0.39	0.24	0.18	0.26	0.23	0.28	0.14	0.15	<0.1	1.55	<0.2	0.41	0.41	0.73	0.58	0.25	0.38	0.22
Chromium	M	2450	mg/kg	1	910	37.20	238.00	12.00	450.00	340.00	120.00	120.00	230.00	48.00	10.00	700.00	63.00	170.00	52.00	130.00	71.00	14.00	340.00	12.00	49.50	<9	9.75	16.00	20.00	480.00	25.00	270.00	12.00
Manganese	M	2450	mg/kg	5		2940.00	16900.00	1060.00	18000.00	17000.00	6200.00	120000.00	12000.00	3300.00	790.00	48000.00	4600.00	13000.00	3000.00	9700.00	4300.00	2000.00	13000.00	2400.00	6190.00	7060.00	2000.00	1300.00	2100.00	20000.00	1400.00	25000.00	1600.00
Copper	M	2450	mg/kg	0.5	2400	19.60	26.30	17.80	61.00	23.00	21.00	22.00	12.00	14.00	2.80	23.00	15.00	18.00	16.00	15.00	10.00	4.60	50.00	13.00	30.70	20.20	25.40	15.00	15.00	27.00	16.00	46.00	11.00
Mercury	M	2450	mg/kg	0.1	1.2	<1	<1	<1	1.20	0.29	0.12	0.07	0.13	0.07	<0.05	0.19	0.08	0.05	0.20	0.25	0.06	<0.05	0.89	<0.1	2.18	1.89	<1.4	<0.1	<0.1	0.17	0.09	<0.05	<0.1
Nickel	M	2450	mg/kg	0.5	1.30E+02	24.80	18.70	19.60	17.00	11.00	10.00	36.00	4.50	21.00	5.30	16.00	16.00	16.00	20.00	12.00	9.60	3.70	16.00	4.30	60.40	37.90	30.10	15.00	14.00	17.00	17.00	30.00	5.60
Lead	M	2450	mg/kg	0.5	2.00E+02	127.00	167.00	27.00	43.00	55.00	39.00	25.00	34.00	34.00	9.40	41.00	28.00	23.00	34.00	35.00	37.00	19.00	38.00	14.00	150.00	94.30	36.40	54.00	110.00	40.00	68.00	84.00	18.00
Selenium	M	2450	mg/kg	0.2	250	<10	<10	<10	<0.2	1.30	0.60	0.64	1.90	0.90	0.33	0.50	0.53	1.20	0.77	0.67	0.46	1.40	<0.2	3.40	<10	<10	<10	2.50	4.60	1.40	1.30	1.30	1.20
Vanadium	U	2450	mg/kg	5	410	62.90	208.00	25.60	400.00	380.00	140.00	98.00	220.00	49.00	11.00	660.00	67.00	610.00	110.00	530.00	190.00	31.00	300.00	24.00	208.00	122.00	82.00	35.00	43.00	480.00	17.00	470.00	26.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	236.00	546.00	75.60	60.00	150.00	95.00	99.00	60.00	90.00	20.00	70.00	66.00	44.00	74.00	120.00	120.00	60.00	86.00	12.00	564.00	159.00	68.80	49.00	60.00	120.00	90.00	130.00	51.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	0.01	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	0.04	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	0.21	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	12.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	14.00	20.00	<1	<1	<1	48.00
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	18.00	20.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	17.00	<1	1.66	1.09	20.00	19.00	<1	<1	<1	<1	110.00
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	1.27	6.33	<1	<1	<1	<1	8.90	17.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	17.00	6.16	17.80	2.54	37.00	25.00	<1	<1	<1	<1	100.00
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	3.58	28.00	2.29	<1	<1	<1	58.00	250.00	<1	150.00	<1	<1	150.00	250.00	<1	<1	<1	<1	46.00	15.70	84.40	9.79	69.00	53.00	120.00	<1	<1	330.00
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	2.02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.84	37.00	1.68	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		5.23	39.20	<5	<5	<5	<5	85.00	300.00	<5	150.00	<5	<5	150.00	250.00	<5	<5	<5	<5	79.00	25.10	141.00	15.30	140.00	120.00	120.00	<5	<5	590.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	0.14	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	15.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	9.66	2.60	<1	<1	<1	<1	5.50
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	2.27	6.46	<1	<1	<1	<1	5.60	<1	5.70	<1	<1	<1	<1	<1	<1	48.00	<1	<1	<1	2.35	2.20	117.00	<1	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	8.87	53.10	25.80	<1	<1	<1	200.00	90.00	71.00	33.00	36.00	41.00	<1	<1	42.00	<1	<1	<1	29.00	16.10	11.40	217.00	31.00	30.00	74.00	<1	<1	170.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	7.87	22.80	11.40	<1	<1	<1	5.60	6.70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	5.70	<1	1.00	24.50	<1	4.90	<1	<1	<1	17.00
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		19.40	83.40	37.90	<5	<5	<5	210.00	97.00	77.00	33.00	36.00	41.00	<5	<5	100.00	<5	<5	<5	35.00	20.10	15.30	368.00	34.00	35.00	74.00	<5	<5	190.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		24.60	123.00	37.90	<10	<10	<10	290.00	400.00	77.00	190.00	36.00	41.00	150.00	250.00	100.00	<10	<10	<10	110.00	45.20	156.00	384.00	170.00	150.00	190.00	<10	<10	780.00
Organic Matter	M	2625	%	0.4		11.30	12.00	5.26	22.00	22.00	100.00	64.00	11.00	11.00	5.70	1.90	2.60	2.10	26.00	5.20	21.00	28.00	33.00	6.00	17.80	3.36	7.43	6.60	2.40	7.40	13.00	3.10	8.10
Naphthalene	M	2800	mg/kg	0.1	15	0.33	0.09	0.09	<0.1	<0.1	<0.1	2.90	0.35	0.76	<0.1	<0.1	0.28	1.70	<0.1	15.00	24.00	1.40	<0.1	<0.1	0.27	0.03	0.08	<0.1	<0.1	<0.1	<0.1	<0.1	0.54
Acenaphthylene	N	2800	mg/kg	0.1	170	0.08	0.04	0.02	<0.1	<0.1	<0.1	1.40	0.11	0.26	<0.1	<0.1	0.24	0.16	<0.1	2.20	3.90	0.13	<0.1	<0.1	0.10	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	0.10
Acenaphthene	M	2800	mg/kg	0.1	210	0.02	0.02	<0.01	<0.1	<0.1	<0.1	0.31	0.15	0.13	<0.1	<0.1	0.12	1.10	<0.1	0.59	0.73	0.18	<0.1	<0.1	0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	0.43
Fluorene	M	2800	mg/kg	0.1	170	0.06	0.03	0.01	<0.1	<0.1	<0.1	0.89	0.12	0.18	<0.1	<0.1	0.19	0.50	<0.1	2.40	2.60	0.20	<0.1	<0.1	0.08	0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	0.26
Phenanthrene	M	2800	mg/kg	0.1	95	0.41	0.37	0.17	<0.1	1.90	0.20	8.10	1.10	1.10	<0.1	0.84	0.92	9.50	0.61	24.00	17.00	1.20	1.90	0.23	0.76	0.06	0.09	0.50	0.72	<0.1	0.17	<0.1	0.91
Anthracene	M	2800	mg/kg	0.1	2400	0.11	0.09	0.04	<0.1	0.35	<0.1	2.50	0.23	0.26	<0.1	<0.1	0.21	0.32	1.10	0.11	4.30	4.60	0.29	0.39	<0.1	0.20	<0.02	<0.02	<0.1	0.14	<0.1	<0.1	0.16
Fluoranthene	M	2800	mg/kg	0.1	280	0.60	0.67	0.26	0.83	2.80	1.00	20.00	1.60	2.00	<0.1	0.95	1.50	13.00	0.79	34.00	26.00	1.50	2.20	0.20	1.33	0.04	0.11	0.41	0.73	<0.1	0.76	<0.1	0.63
Pyrene	M	2800	mg/kg	0.1	620	0.47	0.55	0.22	0.70	2.30	1.00	14.00	1.30	1.60	<0.1	0.88	1.60	11.00	0.65	24.00	18.00	1.30	1.60	0.21	1.03	0.04	0.08	0.30	0.61	<0.1	0.75	<0.1	0.51
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	0.32	0.36	0.14	0.38	1.20	0.72	9.30	0.90	1.10	<0.1	0.56	1.00	6.70	0.30	12.00	11.00	0.69	0.84	<0.1	0.65	0.02	0.05	0.21	0.42	<0.1	0.53	<0.1	0.16
Chrysene	M	2800	mg/kg	0.1	15	0.36	0.39	0.16	0.52	1.40	0.73	9.20	0.86	1.00	<0.1	0.65	0.92	8.00	0.34	12.00	12.00	0.67	1.20	<0.1	0.62	0.03	0.05	0.22	0.34	<0.1	0.49	<0.1	0.27
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	0.47	0.59	0.24	1.00	1.50	1.10	12.00	1.40	1.80	<0.1	<0.1	1.50	12.00	0.58	16.00	15.00	0.98	1.70	<0.1	0.90	0.05	0.07	0.23	0.51	<0.1	0.75	<0.1	0.36
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.14	0.21	0.07	0.31	0.57	0.40	4.10	0.39	0.66	<0.1	<0.1	0.50	4.70	0.21	5.40	5.20	0.32	0.58	<0.1	0.29	<0.01	0.02	0.11	0.17	<0.1	0.29	<0.1	0.14
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.28	0.37	0.14	0.70	1.30	0.91	8.20	0.91	1.20	<0.1	<0.1	0.94	11.00	0.34	12.00	10.00	0.60	0.98	<0.1	0.53	0.02	0.04	0.16	0.37	<0.1	0.67	<0.1	0.22
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	0.23	0.35	0.14	<0.1	0.80	0.85	7.30	<0.1	<0.1	<0.1	<0.1	<0.1	7.80	0.35	8.90	7.60	0.48	<0.1	<0.1	0.49	0.02	0.03	<0.1	<0.1	<0.1	0.43	<0.1	0.17
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.05	0.07	0.03	<0.1	0.18	0.26	1.30	<0.1	<0.1	<0.1	<0.1	<0.1	1.40	0.10	1.80	1.50	0.16	<0.1	<0.1	0.10	<0.02	<0.02	<0.1	<0.1	<0.1	0.11	<0.1	<0.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	0.21	0.32	0.13	<0.1	0.81	0.92	6.00	<0.1	<0.1	<0.1	<0.1	<0.1	7.90	0.35	8.10	6.70	0.53	<0.1	<0.1	0.41	<0.02	<0.02	<0.1	<0.1	<0.1	0.49	<0.1	0.19
Total Of 16 PAH's	N	2800	mg/kg	2		4.13	4.50	1.86	4.40	15.00	8.10	110.00	9.40	12.00	<2	4.10	10.00	98.00	4.70	180.00	170.00	11.00	11.00	<2	7.77	0.33	0.62	2.10	4.00	<2	5.40	<2	5.10
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.01	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	<0.04	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.04	<0.04	0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00	<180	<180	<180	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3.40	<180	<180	<180	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00	<140	<140	<140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.30	<140	<140	<140	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<80	<80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<80	<80	<80	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<1	<1	<1	<1	<1	<1

Results - Soil

Client: Rodgers Leask Environmental						Job No.:		22-14900	21-41336	22-14900	22-18735	21-41336	21-41336	21-41336	22-20747	22-20747	22-20750	22-20750	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
						Sample ID.:	Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	1415357	1326709	1415349	1432310	1326711	1326712	1326713	1441650	1441651	1441657	1441658	1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703
						Client Sample Ref.:		AQ22-2	AQ31-1	AQ27-1	AQ28-1	AQ30-1	AQ30-2	AQ30-3	AS35-1	AS35-2	AR35-2	AR35-1	AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1
						Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
						Top Depth (m):		1.7	1.0	0.4	1.00	0.5	1.7	2.8		2.00	1.30	0.60	0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5
						Bottom Depth (m):									0.30																			
						Date Sampled:		20/04/2022		20/04/2022	18/05/2022	19/11/2021	19/11/2021	19/11/2021	31/05/2022	31/05/2022	31/05/2022	31/05/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	20/04/2022	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
						Asbestos Lab:		NEW-ASB	445:19		DURHAM	COVENTRY			COVENTRY	COVENTRY	COVENTRY		NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB		COVENTRY			COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																														
ACM Type	U	2192		N/A				-	-		-	Chrysotile		-		-	-		-			-		-		-	-		-		-		-
Asbestos Identification	U	2192		N/A				No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001								<0.001																						
Total Asbestos	U	2192	%	0.001																														
Moisture	N	2030	%	0.02				13.00	4.30	10.00	8.40	12.00	17.00	20.00	6.20	19.00	9.20	7.10	5.60	13.00	9.00	16.00	3.90	12.00	8.40	15.00	9.40	13.00	17.00	10.00	8.40	7.70	24.00	16.00	9.60
Soil Colour	N	2040		N/A				Brown	Brown	Black	Brown	Brown	Black	Black	Brown	Black	Brown	Brown	Brown	Brown	Black	Black	Brown	Black	Brown	Black	Black	Black	Black	Brown	Brown	Brown	Black	Brown	Brown
Other Material	N	2040		N/A				Stones	Stones	Stones	Roots and Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A				Gravel	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C	M	2010	pH units	4				10.90	> 12.0	11.00	8.90	11.60	11.20	11.20	11.30	10.50	10.60	9.40	10.40	10.50	11.00	10.30	10.40	9.90	11.40	10.90	10.40	10.30	10.70	10.30	10.50	11.80	11.50	10.20	10.30
Cyanide (Total)	M	2300	mg/kg	0.5				1.80	<0.5	<0.5	<0.5	4.50	2.40	<0.5	1.30	2.10	3.50	3.70	<0.5	<0.5	3.00	<0.5	0.60	<0.5	1.20	<0.5	2.70	1.60	20.00	22.00	1.70	1.90	<0.5	<0.5	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5				6.20	0.56	8.60	1.40	<0.5	0.61	1.50	1.30	1.60	2.70	1.60	1.60	0.93	0.72	1.20	4.90	4.30	1.30	2.10	11.00	7.80	6.00	14.00	6.90	4.40	4.20	16.00	1.90
Iron (Total)	N	2430	mg/kg	100				13000.00	21000.00	12000.00	53000.00	23000.00	23000.00	14000.00	24000.00	23000.00	22000.00	23000.00	34000.00	35000.00	32000.00	41000.00	26000.00	37000.00	28000.00	25000.00	24000.00	26000.00	26000.00	25000.00	26000.00	23000.00	20000.00	25000.00	26000.00
Arsenic	M	2450	mg/kg	1	37			3.70	43.00	4.60	1.90	25.00	22.00	12.00	7.90	19.00	15.00	7.10	5.70	4.20	4.30	11.00	5.80	8.30	4.60	4.90	43.00	35.00	19.00	17.00	14.00	22.00	3.00	14.00	18.00
Cadmium	M	2450	mg/kg	0.1	26			0.10	<0.1	<0.1	<0.1	0.59	1.10	2.50	0.57	0.73	0.42	0.60	0.70	0.20	0.20	0.25	0.22	0.46	0.24	0.17	0.69	0.40	0.36	1.30	0.25	0.84	<0.1	0.79	0.33
Chromium	M	2450	mg/kg	1	910			74.00	1200.00	12.00	92.00	410.00	570.00	86.00	82.00	150.00	41.00	54.00	78.00	52.00	240.00	43.00	43.00	21.00	190.00	25.00	110.00	110.00	130.00	79.00	74.00	590.00	44.00	63.00	49.00
Manganese	M	2450	mg/kg	5				2800.00	35000.00	2400.00	3900.00	18000.00	11000.00	2300.00	4200.00	5700.00	2100.00	3200.00	6500.00	5500.00	12000.00	3300.00	4400.00	2900.00	11000.00	2000.00	12000.00	11000.00	6400.00	5400.00	5100.00	26000.00	1400.00	2500.00	4600.00
Copper	M	2450	mg/kg	0.5	2400			7.40	290.00	13.00	8.20	51.00	73.00	34.00	20.00	83.00	35.00	23.00	29.00	55.00	20.00	19.00	9.00	15.00	21.00	14.00	95.00	95.00	67.00	36.00	130.00	71.00	120.00	180.00	26.00
Mercury	M	2450	mg/kg	0.1	1.2			<0.1	1.90	<0.1	<0.05	1.40	0.85	0.24	0.26	0.38	0.21	0.26	0.22	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.66	0.85	0.89	0.27	0.24	2.70	0.24	0.19	0.26
Nickel	M	2450	mg/kg	0.5	1.30E+02			9.20	26.00	4.30	5.30	32.00	150.00	15.00	17.00	33.00	20.00	18.00	24.00	41.00	16.00	16.00	9.40	10.00	13.00	9.40	46.00	47.00	34.00	37.00	46.00	58.00	11.00	36.00	51.00
Lead	M	2450	mg/kg	0.5	2.00E+02			12.00	80.00	14.00	13.00	78.00	110.00	160.00	63.00	160.00	120.00	150.00	37.00	26.00	19.00	71.00	21.00	63.00	22.00	40.00	140.00	140.00	310.00	150.00	61.00	52.00	20.00	72.00	87.00
Selenium	M	2450	mg/kg	0.2	250			3.70	<0.2	3.40	0.61	<0.2	<0.2	<0.2	1.00	2.40	1.20	1.20	2.70	2.60	1.80	0.94	2.30	1.50	2.50	1.90	<0.2	0.28	0.33	0.39	<0.2	<0.2	0.63	0.54	0.23
Vanadium	U	2450	mg/kg	5	410			120.00	800.00	24.00	82.00	390.00	250.00	82.00	81.00	110.00	46.00	46.00	160.00	140.00	450.00	82.00	110.00	46.00	320.00	50.00	140.00	120.00	100.00	110.00	120.00	1400.00	94.00	100.00	46.00
Zinc	M	2450	mg/kg	0.5	3.70E+03			25.00	82.00	12.00	43.00	110.00	120.00	190.00	140.00	240.00	220.00	280.00	110.00	48.00	61.00	170.00	73.00	140.00	52.00	50.00	200.00	160.00	160.00	300.00	150.00	91.00	27.00	140.00	150.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02			7.80	<1	<1	<1	<1	<1	<1	<1	<1	4.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03			21.00	<1	17.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	11.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04			22.00	<1	17.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	23.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04			39.00	<1	46.00	<1	230.00	<1	<1	<1	<1	<1	<1	<1	12.00	<1	<1	<1	120.00	540.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04			<1	<1	<1	39.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5				90.00	<5	79.00	39.00	230.00	<5	<5	<5	<5	<5	<5	<5	12.00	<5	<5	<5	150.00	540.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	21.00	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140			<1	<1	<1	190.00	<1	<1	<1	<1	<1	<1	3.30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260			<1	<1	<1	3400.00	<1	<1	<1	<1	<1	<1	12.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	36.00	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03			35.00	<1	29.00	4500.00	210.00	<1	<1	<1	<1	12.00	120.00	<1	350.00	<1	170.00	<1	210.00	160.00	<1	<1	88.00	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03			<1	<1	5.70	810.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5				35.00	<5	35.00	8900.00	210.00	<5	<5	<5	<5	12.00	130.00	<5	350.00	<5	170.00	<5	210.00	160.00	<5	<5	150.00	<5	<5	<5	<5	<5	<5	<5
Total Petroleum Hydrocarbons	N	2680	mg/kg	10				120.00	<10	110.00	9000.00	440.00	<10	<10	<10	<10	16.00	130.00	<10	360.00	<10	170.00	<10	360.00	690.00	<10	<10	150.00	<10	<10	<10	<10	<10	<10	<10
Organic Matter	M	2625	%	0.4				2.90	2.80	6.00	64.00	9.00	29.00	59.00	4.70	28.00	15.00	13.00	1.90	1.70	6.40	100.00	14.00	28.00	8.50	66.00	24.00	59.00	64.00	17.00	98.00	2.80	100.00	47.00	40.00
Naphthalene	M	2800	mg/kg	0.1	15			<0.1	<0.1	<0.1	4.00	<0.1	<0.1	<0.1	0.38	0.67	0.85	1.20	<0.1	<0.1	<0.1	2.10	<0.1	1.50	<0.1	<0.1	<0.1	<0.1	1.80	3.20	<0.1	<0.1	0.67	<0.1	<0.1
Acenaphthylene	N	2800	mg/kg	0.1	170			<0.1	<0.1	<0.1	0.34	<0.1	<0.1	<0.1	0.36	0.10	2.00	4.20	<0.1	<0.1	<0.1	0.13	<0.1	0.10	<0.1	<0.1	<0.1	<0.1	0.66	0.67	<0.1	<0.1	0.13	<0.1	<0.1
Acenaphthene	M	2800	mg/kg	0.1	210			<0.1	<0.1	<0.1	0.34	<0.1	<0.1	<0.1	<0.1	0.11	0.16	0.18	<0.1	<0.1	<0.1	0.44	<0.1	0.20	<0.1	<0.1	<0.1	<0.1	0.24	0.28	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	M	2800	mg/kg	0.1	170			<0.1	<0.1	<0.1	0.35	<0.1	<0.1	<0.1	0.16	<0.1	0.36	0.34	<0.1	<0.1	<0.1	0.78	<0.1	0.25	<0.1	<0.1	<0.1	<0.1	0.32	0.52	<0.1	<0.1	0.47	<0.1	<0.1
Phenanthrene	M	2800	mg/kg	0.1	95			0.33	0.24	0.23	2.90	<0.1	1.60	1.40	2.30	0.67	4.00	2.60	0.24	0.12	0.47	4.50	0.90	1.00	1.10	1.30	0.71	2.50	4.10	3.80	1.10	<0.1	5.70	1.40	0.84
Anthracene	M	2800	mg/kg	0.1	2400			<0.1	0.20	<0.1	0.66	<0.1	0.27	0.41	0.59	0.14	1.60	1.60	<0.1	<0.1	<0.1	1.00	0.18	0.18	0.20	0.25	0.22	1.00	0.91	1.10	0.19	<0.1	0.88	0.22	0.32
Fluoranthene	M	2800	mg/kg	0.1	280			0.15	0.47	0.20	3.70	1.30	2.20	1.80	5.70	1.10	14.00	15.00	0.50	0.25	1.30	5.40	0.99	0.88	2.50	0.85	1.10	4.10	6.40	6.60	2.00	0.98	3.10	1.20	1.90
Pyrene	M	2800	mg/kg	0.1	620			0.13	0.21	0.21	3.00	1.50	1.70	1.60	4.30	0.77	11.00	14.00	0.60	0.22	1.40	4.00	0.80	0.78	2.40	0.79	1.00	3.20	4.50	4.50	1.30	0.94	1.90	0.82	1.40
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2			<0.1	0.23	<0.1	2.10	0.97	1.10	1.10	2.40	0.43	7.30	11.00	0.33	0.14	0.64	4.30	0.42	0.37	1.90	0.50	0.74	2.20	3.20	3.20	1.30	0.85	1.70	0.77	1.40
Chrysene	M	2800	mg/kg	0.1	15			<0.1	0.40	<0.1	2.40	1.10	1.30	0.99	2.60	0.49	6.70	11.00	0.38	0.14	0.88	3.80	0.40	0.41	2.40	0.49	0.70	2.50	3.40	2.80	1.30	1.00	2.00	0.90	1.60
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6			<0.1	0.24	<0.1	3.70	2.20	1.80	1.40	3.10	0.73	14.00	28.00	0.68	0.29	1.40	7.30	0.83	0.60	3.90	0.74	1.70	4.10	5.20	4.80	1.30	1.70	1.90	1.10	3.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77			<0.1	0.17	<0.1	1.10	0.66	0.58	0.47	1.10	0.24	4.20	9.20	0.18	0.12	0.51	2.40	0.22	0.20	1.40	0.15	0.49	1.10	1.40	1.40	0.73	0.77	0.60	0.38	0.87
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2			<0.1	0.27	<0.1	2.70	1.30	1.20	0.82	2.10	0.41	11.00	22.00	0.57	0.26	0.89	5.60	0.66	0.38	2.80	0.50	0.85	2.80	2.80	3.10	1.20	1.40	1.00	0.72	2.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27			<0.1	0.37	<0.1	2.10	<0.1	1.10	0.43	1.70	0.20	10.00	22.00	0.41	<0.1	0.76	3.40	0.57	0.30	2.00	0.27	0.72	2.90	2.80	2.40	1.00	1.00	<0.1	<0.1	2.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24			<0.1	0.42	<0.1	0.41	<0.1	0.30	0.10	0.35	0.10	2.00	3.30	<0.1	<0.1	0.14	1.20	0.14	0.11	0.38	0.11	0.22	0.43	1.10	0.83	0.24	<0.1	<0.1	<0.1	0.48
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320			<0.1	0.38	<0.1	2.20	<0.1	0.99	0.58	1.60	0.27	8.60	18.00	0.40	<0.1	0.73	3.20	0.63	0.41	1.90	0.34	0.91	1.90	2.50	2.30	0.84	0.78	<0.1	<0.1	1.60
Total Of 16 PAH's	N	2800	mg/kg	2				<2	3.60	<2	32.00	9.00	14.00	11.00	29.00	6.40	98.00	160.00	4.30	<2	9.10	50.00	6.70	7.70	23.00	6.30	9.40	29.00	41.00	42.00	13.00	9.40	20.00	7.50	18.00
Resorcinol	M	2920	mg/kg	0.02				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280			<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00			<1	<1	3.40	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.30	<1	1.80	2.50	3.70	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00			<1	<1	2.30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.00	<1	2.00	1.60	2.80	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Results - Soil

Client: Rodgers Leask Environmental						In-Situ Trial Pit Samples																								
			Job No.:			21-41336	21-41336	21-41336	21-41336	22-21373	22-20752	22-20752	22-21373	22-21373	22-21373	22-21373	22-20747	22-20747	22-20747	22-29945	22-20752	22-20752	22-20752	22-20752	22-26760	22-26760	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	210130-32
			Sample ID.:		Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	1326704	1326705	1326706	1326707	1444540	1441671	1441672	1444541	1444542	1444543	1444544	1441648	1441650	1441651	1482831	1441669	1441670	1441673	1441675	1468354	1468355	1440206	1440207	1440208	1440209	1440210	1440211	
			Client Sample Ref.:			AT31-2	AS31-1	AS31-2	AR31-1	AU33-1	AU34-2	AU34-1	AT33-1	AT33-2	AS33-1	AS33-2	AS34-1	AS35-1	AS35-2	AT32-1	AT35-1	AT35-2	AT34-2	AU36-1	AV31-1	AV32-1	AV35-1	AV35-2	AV36-1	AV36-2	AV37-1	AV37-2	AJ27-1
			Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID
			Top Depth (m):			1.8	0.6	1.7	0.3	0.90			1.20	2.00	1.20	2.00				1.3				0.70	1.00							0.70-0.70
			Bottom Depth (m):								2.3	0.5					0.40	0.30	2.00		0.5	1.4	1.5	0.7	0.70	1.00	1.00	2.00	0.30	1.30	0.50	1.60	
			Date Sampled:			19/11/2021	19/11/2021	19/11/2021	19/11/2021	07/06/2022	31/05/2022	31/05/2022	07/06/2022	07/06/2022	07/06/2022	07/06/2022	31/05/2022	31/05/2022	31/05/2022	04/08/2022	31/05/2022	31/05/2022	31/05/2022	31/05/2022	13/07/2022	13/07/2022	30/05/2022	30/05/2022	30/05/2022	30/05/2022	30/05/2022	30/05/2022	1/29/2021
			Asbestos Lab:			COVENTRY		COVENTRY		DURHAM	NEW-ASB			DURHAM		DURHAM			COVENTRY	COVENTRY	NEW-ASB		NEW-ASB	NEW-ASB	DURHAM	DURHAM	DURHAM		DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A			-		-	-	-	-		-		-			-	-	-		-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A			No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected			No Asbestos Detected		No Asbestos Detected			No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001																											
Total Asbestos	U	2192	%	0.001																											
Moisture	N	2030	%	0.02		8.20	10.00	9.70	5.00	6.50	14.00	6.50	7.40	11.00	13.00	13.00	5.80	6.20	19.00	11.00	10.00	13.00	9.50	6.40	2.90	4.10	8.80	9.60	12.00	7.20	11.00	6.80	14
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	
pH at 20C	M	2010	pH units	4		10.20	11.80	11.20	10.90	11.00	10.20	10.30	10.50	10.80	12.00	9.70	10.50	11.30	10.50	9.10	> 12.0	> 12.0	11.20	11.80	9.60	10.10	10.70	10.60	10.00	10.30	10.90	11.00	11.90
Cyanide (Total)	M	2300	mg/kg	0.5		1.30	2.40	3.40	<0.5	4.50	0.70	1.50	2.60	3.50	1.80	1.50	14.00	1.30	2.10	1.40	14.00	5.40	2.70	18.00	1.20	<0.5	5.20	3.10	8.00	<0.5	10.00	<0.5	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		1.40	<0.5	0.74	0.75	1.20	12.00	2.20	4.70	0.86	71.00	1.30	1.40	1.30	1.60	27.00	1.00	0.65	0.76	1.10	<0.5	<0.5	0.78	0.64	0.58	4.40	1.00	<0.5	<12
Iron (Total)	N	2430	mg/kg	100		22000.00	22000.00	23000.00	8900.00	25000.00	19000.00	20000.00	18000.00	19000.00	19000.00	21000.00	26000.00	24000.00	23000.00	88000.00	23000.00	22000.00	12000.00	25000.00	110000.00	83000.00	4900.00	8700.00	9000.00	6100.00	7800.00	12000.00	133000.00
Arsenic	M	2450	mg/kg	1	37	23.00	26.00	22.00	55.00	72.00	17.00	8.00	4.00	14.00	5.50	22.00	13.00	7.90	19.00	11.00	12.00	8.80	6.90	5.20	8.20	17.00	1.90	2.00	2.10	1.30	2.30	1.20	<6
Cadmium	M	2450	mg/kg	0.1	26	0.24	0.15	0.38	0.82	0.68	0.24	0.35	0.42	0.22	0.14	0.45	0.54	0.57	0.73	2.10	1.20	0.77	0.22	0.25	0.14	0.56	0.35	0.24	0.37	0.29	<0.1	0.26	1.92
Chromium	M	2450	mg/kg	1	910	82.00	670.00	120.00	10.00	66.00	15.00	39.00	11.00	11.00	22.00	12.00	36.00	82.00	150.00	32.00	270.00	110.00	34.00	89.00	28.00	43.00	12.00	22.00	22.00	12.00	35.00	55.00	374.00
Manganese	M	2450	mg/kg	5		6100.00	28000.00	7300.00	1800.00	17000.00	480.00	2400.00	2000.00	1300.00	2600.00	510.00	19000.00	4200.00	5700.00	2800.00	9900.00	5000.00	2500.00	4900.00	2200.00	15000.00	2000.00	3300.00	2800.00	3000.00	2600.00	3900.00	29500.00
Copper	M	2450	mg/kg	0.5	2400	31.00	130.00	51.00	76.00	30.00	27.00	13.00	7.00	27.00	8.90	38.00	16.00	20.00	83.00	29.00	46.00	37.00	16.00	14.00	13.00	26.00	6.40	6.10	11.00	6.00	5.40	5.30	27.70
Mercury	M	2450	mg/kg	0.1	1.2	0.21	4.30	0.53	<0.1	0.34	0.12	0.11	<0.05	0.06	<0.05	0.81	0.13	0.26	0.38	0.13	0.29	0.17	0.05	0.17	<0.05	0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<1
Nickel	M	2450	mg/kg	0.5	1.30E+02	17.00	35.00	25.00	10.00	32.00	18.00	13.00	7.00	16.00	6.80	23.00	24.00	17.00	33.00	22.00	29.00	38.00	16.00	11.00	11.00	24.00	3.60	3.60	5.90	3.70	3.90	3.70	15.30
Lead	M	2450	mg/kg	0.5	2.00E+02	140.00	43.00	65.00	21.00	25.00	35.00	41.00	26.00	50.00	20.00	41.00	41.00	63.00	160.00	200.00	170.00	80.00	22.00	32.00	44.00	55.00	33.00	29.00	38.00	34.00	12.00	25.00	53.60
Selenium	M	2450	mg/kg	0.2	250	<0.2	<0.2	<0.2	<0.2	2.10	1.30	0.73	2.20	2.30	2.30	5.40	2.30	1.00	2.40	1.60	0.60	0.51	2.70	0.44	1.20	0.96	0.48	0.29	0.57	0.29	0.81	0.27	14.00
Vanadium	U	2450	mg/kg	5	410	82.00	1200.00	220.00	24.00	79.00	21.00	41.00	29.00	26.00	48.00	22.00	78.00	81.00	110.00	48.00	170.00	76.00	36.00	87.00	40.00	80.00	17.00	27.00	26.00	15.00	35.00	55.00	968.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	180.00	77.00	83.00	60.00	85.00	59.00	110.00	41.00	41.00	42.00	76.00	170.00	140.00	240.00	380.00	560.00	210.00	48.00	130.00	74.00	130.00	76.00	110.00	130.00	140.00	25.00	46.00	84.50
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	9.80	<1	<1	<1	<1	7.30	<1	<1	19.00	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	32.00	8.80	<1	<1	<1	14.00	<1	<1	18.00	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	<1	1200.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	84.00	19.00	<1	<1	<1	16.00	<1	<1	64.00	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	<1	210.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	3000.00	<1	<1	72.00	<1	140.00	<1	<1	140.00	7.44
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	630.00	<1	<1	<1	<1	<1	<1	<1	<1	3.07
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		<5	1400.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	3800.00	28.00	<5	72.00	<5	170.00	<5	<5	240.00	11.50
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.01
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2.70	<1	<1	11.00	4.41
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	<1	19.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	500.00	<1	<1	57.00	<1	84.00	<1	<1	120.00	28.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	33.00	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		<5	19.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	530.00	<5	<5	57.00	<5	86.00	<5	<5	130.00	33.50
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		<10	1400.00	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	4300.00	28.00	<10	130.00	<10	260.00	<10	<10	370.00	45.00
Organic Matter	M	2625	%	0.4		21.00	9.00	11.00	2.20	13.00	17.00	6.00	4.80	15.00	5.00	24.00	3.80	4.70	28.00	24.00	8.30	7.80	3.30	2.90	67.00	47.00	5.00	5.30	11.00	6.60	4.70	2.10	1.31
Naphthalene	M	2800	mg/kg	0.1	15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.38	0.67	<0.1	1.40	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.43	0.62	<0.1	0.59	0.02
Acenaphthylene	N	2800	mg/kg	0.1	170	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.36	0.10	<0.1	0.59	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	0.63	<0.1	2.70	<0.01
Acenaphthene	M	2800	mg/kg	0.1	210	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.11	<0.1	0.35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.15	0.15	<0.1	0.34	0.04
Fluorene	M	2800	mg/kg	0.1	170	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.16	<0.1	<0.1	0.56	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	0.21	<0.1	0.40	0.02
Phenanthrene	M	2800	mg/kg	0.1	95	0.48	<0.1	3.10	<0.1	<0.1	<0.1	0.84	<0.1	<0.1	<0.1	<0.1	1.40	2.30	0.67	0.73	3.10	1.20	0.37	0.48	0.86	1.40	1.40	1.10	0.86	1.20	0.24	2.90	0.46
Anthracene	M	2800	mg/kg	0.1	2400	0.14	<0.1	0.83	<0.1	<0.1	<0.1	0.20	<0.1	<0.1	<0.1	<0.1	0.31	0.59	0.14	0.15	0.82	0.44	0.21	0.55	0.16	0.26	0.48	1.50	0.38	0.60	<0.1	4.30	0.11
Fluoranthene	M	2800	mg/kg	0.1	280	0.68	0.77	6.10	<0.1	0.34	0.50	1.30	<0.1	0.24	0.26	<0.1	2.10	5.70	1.10	0.57	7.00	3.20	0.69	1.90	0.64	0.92	3.50	6.80	2.90	3.50	0.20	23.00	1.25
Pyrene	M	2800	mg/kg	0.1	620	0.51	0.75	4.60	<0.1	0.40	0.62	0.94	<0.1	0.21	0.24	<0.1	1.50	4.30	0.77	0.44	7.10	3.20	0.62	2.30	0.56	0.75	2.90	6.70	2.40	3.30	0.19	24.00	1.19
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	0.48	0.70	2.50	<0.1	<0.1	0.51	0.86	<0.1	<0.1	<0.1	<0.1	0.87	2.40	0.43	<0.1	4.00	2.10	<0.1	1.80	0.42	0.60	2.00	4.70	1.80	2.90	0.14	15.00	0.72
Chrysene	M	2800	mg/kg	0.1	15	0.65	0.68	1.70	<0.1	<0.1	0.57	0.59	<0.1	<0.1	<0.1	<0.1	0.88	2.60	0.49	<0.1	4.20	2.00	<0.1	2.00	0.32	0.65	1.80	6.40	2.00	3.90	0.17	21.00	0.83
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	1.00	1.20	1.90	<0.1	<0.1	<0.1	1.10	<0.1	<0.1	<0.1	<0.1	1.50	3.10	0.73	<0.1	7.70	3.60	<0.1	4.40	0.50	0.77	3.30	9.20	2.30	5.80	0.22	33.00	1.19
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.27	0.49	0.50	<0.1	<0.1	<0.1	0.39	<0.1	<0.1	<0.1	<0.1	0.53	1.10	0.24	<0.1	2.70	1.30	<0.1	1.50	0.16	0.21	1.20	2.80	0.80	1.80	0.12	11.00	0.38
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.81	1.00	1.30	<0.1	<0.1	<0.1	1.10	<0.1	<0.1	<0.1	<0.1	0.89	2.10	0.41	<0.1	6.10	2.50	<0.1	3.60	0.38	0.49	2.50	7.10	1.90	4.50	0.16	26.00	0.78
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.68	1.70	0.20	<0.1	4.90	2.20	<0.1	<0.1	<0.1	0.45	2.40	6.50	1.40	4.20	<0.1	23.00	0.62
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.18	0.35	0.10	<0.1	0.91	0.63	<0.1	<0.1	<0.1	0.17	0.45	1.00	0.35	0.67	<0.1	3.90	0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.78	1.60	0.27	<0.1	4.40	2.00	<0.1	<0.1	<0.1	0.45	2.10	5.80	1.40	4.00	<0.1	22.00	0.65
Total Of 16 PAH's	N	2800	mg/kg	2		5.00	5.60	23.00	<2	<2	2.20	7.30	<2	<2	<2	<2	12.00	29.00	6.40	<2	56.00	24.00	<2	19.00	4.00	7.10	24.00	60.00	19.00	38.00	<2	210.00	8.35
Resorcinol	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.88	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01
Cresols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.10	<0.02	<0.02	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Trimethylphenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.88	<0.1	<0.1	<0.1	1.10	<0.1	<0.1	<0.04
Benzene	M	2760	µg/kg	1	87.00	<1	<1	<1	<1	<1	<1	<1	<1	3.50	<1	<1	<1	<1	<1	<1	1.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<180
Toluene	M	2760	µg/kg	1	130000.00	<1	<1	<1	<1	<1	<1	<1	<1	2.40	<1	<1	<1	<1	<1	<1	1.30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<200

Results - Soil

Client: Rodgers Leask Environmental	Job No.:					210130-32	210130-32	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27	210114-154	210114-154	210115-27	210115-27	210114-156	210114-156	21-41336	21-41336	210114-156	210114-156	22-29945	210129-39	210129-39	210115-27	210115-27	22-16145	22-16145	22-16145	21-41336	22-14900
	Sample ID.:				Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)															1326721	1326722			1482833					1420835	1420836	1420838	1326715	1415350
	Client Sample Ref.:					AK34-1	AK34-2	AN23-1	AN23-2	AQ27-1	AQ27-2	AQ29-1	AQ29-2	AQ21-1	AQ21-2	AQ24-1	AQ24-2	AT29-1	AT29-2	AT26-1	AT26-2	AV29-1	AV29-2	AV30-1	AI30-1	AI30-2	AL24-1	AL24-2	AN29-1	AN29-2	AN30-1	AN31-1	AP27-1
	Sample Type:					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOLID	SOLID	SOIL	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.80-0.80	1.60-1.60	0.20-0.20	1.50-1.50	0.60-0.60	1.20-1.20	0.50-0.50	1.50-1.50	0.40-0.40	1.90-1.90	0.20-0.20	1.50-1.50	0.50-0.50	1.10-1.10	1.0	1.4	0.80-0.80	1.70-1.70	1.0	0.30-0.30	1.80-1.80	0.70-0.70	1.30-1.30	0.3	1.0	0.4	0.3	0.4
	Bottom Depth (m):																												0.3	1.0	0.4		44671
	Date Sampled:					1/29/2021	1/29/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	11/01/2021	11/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	19/11/2021	19/11/2021	13/01/2021	13/01/2021	04/08/2022	28/01/2021	28/01/2021	13/01/2021	13/01/2021	28/04/2022	28/04/2022	28/04/2022	19/11/2021	NEW-ASB
	Asbestos Lab:																							COVENTRY						NEW-ASB			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A																-				-		Chrysotile				-	-	-	-
Asbestos Identification	U	2192		N/A		-	Not Detected	Not Detected	-	Not Detected	-	Not Detected	-	-	Not Detected	Not Detected	-	Not Detected	-	No Asbestos Detected		Not Detected	-	No Asbestos Detected	-	Detected	Not Detected	-			No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0018	-	-					
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		11	13	5.8	8.2	9.3	7	7.4	6.5	11	16	16	5.5	12	24	11.00	9.40	15	12	9.20	12	0.00	15	13	11.00	6.60	9.60	9.00	6.10
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Grey	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Brown	Brown	Dark Brown	Black	Brown	Dark Brown	Dark Brown	Black	Grey	Brown	Brown	Brown	Black	Black
Other Material	N	2040		N/A		None	Vegetation	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A																Sand	Sand			Gravel					Sand	Sand	Sand	Sand	Gravel
pH at 20C	M	2010	pH units	4		9.51	10.20	12.00	12.70	11.40	11.90	8.92	12.60	9.35	9.80	10.70	11.80	10.80	10.40	> 12.0	11.00	11.30	8.31	9.60	9.97	10.50	10.40	11.00	10.00	10.30	10.10	> 12.0	10.80
Cyanide (Total)	M	2300	mg/kg	0.5		<1	<1	<1	<1	<1	<1	<1	<1	3.73	<1	<1	<1	<1	<1	1.10	<0.5	<1	<1	0.80	<1	2.13	<1	<1	1.40	1.40	<0.5	3.60	<0.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<0.5	1.20	<12	127.00	12.00	<12	<12	<12	<12	0.70	0.58	<0.5	0.70	2.70
Iron (Total)	N	2430	mg/kg	100		0.00	101000.00	159000.00	139000.00	107000.00	430000.00	140000.00	140000.00	230000.00	185000.00	116000.00	356000.00	32600.00	23900.00	22000.00	22000.00	321000.00	14800.00	92000.00	82800.00	44500.00	31600.00	12000.00	26000.00	27000.00	20000.00	23000.00	11000.00
Arsenic	M	2450	mg/kg	1	37	13.60	15.90	<6	<6	8.95	7.22	9.67	<6	16.70	14.00	<60	11.00	4.22	5.02	33.00	30.00	17.20	4.66	28.00	6.78	<6	7.68	1.33	4.90	3.90	2.80	27.00	3.60
Cadmium	M	2450	mg/kg	0.1	26	1.49	1.34	0.48	<0.2	0.89	<0.2	1.81	0.40	<0.2	<0.2	<2	<0.2	0.15	<0.02	0.10	0.74	4.82	0.30	2.40	0.86	0.69	<0.02	<0.02	0.89	0.35	<0.1	0.34	<0.1
Chromium	M	2450	mg/kg	1	910	119.00	33.80	841.00	376.00	131.00	39.80	456.00	802.00	<9	<9	291.00	28.60	25.60	8.05	400.00	140.00	<9	<9	79.00	144.00	50.70	13.10	7.04	94.00	140.00	19.00	410.00	48.00
Manganese	M	2450	mg/kg	5		8330.00	6690.00	33700.00	34500.00	11600.00	6230.00	23400.00	38000.00	4830.00	3160.00	16500.00	6350.00	5800.00	1800.00	28000.00	5200.00	10900.00	2880.00	9500.00	13500.00	2670.00	2410.00	4760.00	<1	<1	3700.00	17000.00	3500.00
Copper	M	2450	mg/kg	0.5	2400	23.30	20.20	<14	26.10	79.30	<14	81.40	<14	31.60	21.50	<140	16.80	6.17	17.80	94.00	140.00	43.90	14.30	27.00	14.40	21.80	12.20	<1.4	16.00	15.00	12.00	39.00	45.00
Mercury	M	2450	mg/kg	0.1	1.2	<1	<1	<1.4	<1.4	<1.4	1.84	<1.4	<1.4	2.56	<1.4	<14	<1.4	<0.14	<0.14	0.93	0.41	<1.4	<0.14	0.15	<1.4	<1.4	<0.14	<0.14	0.07	0.11	<0.05	1.30	<0.1
Nickel	M	2450	mg/kg	0.5	1.30E+02	26.50	27.20	9.88	20.60	31.20	18.10	29.70	7.31	58.40	35.00	155.00	35.20	4.84	8.34	51.00	34.00	41.60	7.14	41.00	14.10	12.70	10.40	0.82	9.10	8.90	4.90	21.00	5.50
Lead	M	2450	mg/kg	0.5	2.00E+02	67.50	44.30	7.35	14.90	135.00	26.30	165.00	7.04	160.00	110.00	84.80	17.60	22.50	16.20	31.00	120.00	1400.00	31.70	120.00	15.90	50.10	18.40	<0.7	140.00	63.00	12.00	67.00	18.00
Selenium	M	2450	mg/kg	0.2	250	<10	<10	18.60	24.00	<10	<10	10.10	21.70	<10	<10	<100	<10	4.19	1.30	<0.2	<0.2	<10	6.48	1.20	11.80	<10	2.33	2.98	0.35	1.50	3.10	<0.2	4.20
Vanadium	U	2450	mg/kg	5	410	134.00	53.60	839.00	1800.00	396.00	325.00	419.00	681.00	88.40	72.20	696.00	235.00	51.50	26.90	2300.00	180.00	156.00	22.10	78.00	370.00	73.00	28.70	23.10	120.00	130.00	31.00	360.00	85.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	196.00	120.00	75.20	51.40	764.00	191.00	531.00	44.50	483.00	347.00	207.00	186.00	49.70	46.30	69.00	220.00	2780.00	83.00	390.00	77.70	183.00	83.80	10.80	690.00	170.00	39.00	130.00	29.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<1	<1	<0.01	0.02	<1	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.04	<0.01	0.02	0.08	0.02	<0.01	<0.01	<1	<1	<0.01	0.04	<1	0.01	0.03	0.01	<0.01	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.05	<0.01	0.03	0.12	0.04	<0.01	<0.01	<1	<1	<0.01	0.09	<1	0.03	0.06	0.01	<0.01	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	18.80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8.00
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	2.92	1.25	1.23	<1	5.39	<1	<1	161.00	13.40	2.45	7.05	<1	<1	<1	4.07	<1	<1	<1	<1	<1	<1	<1	<1	<1	56.00
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	1.10	<1	3.07	14.00	6.11	51.20	5.81	17.30	7.11	1.11	179.00	22.50	15.00	23.70	<1	<1	20.50	6.36	<1	<1	<1	11.40	<1	<1	<1	<1	<1	50.00
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	8.10	6.57	22.80	108.00	21.10	9.89	16.50	53.30	11.00	5.21	150.00	20.20	98.80	35.50	<1	<1	38.00	17.00	<1	4.75	16.50	5.32	4.98	<1	<1	<1	<1	52.00
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	7.17	52.80	7.78	<1	1.94	22.70	<1	<1	16.40	2.85	67.50	7.37	<1	<1	1.09	6.10	<1	<1	32.50	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		9.88	8.00	33.60	178.00	36.20	63.00	24.50	98.70	19.20	7.16	524.00	58.90	184.00	73.90	<5	<5	60.40	33.50	<5	6.37	56.30	17.00	5.85	<5	<5	<5	<5	170.00
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<0.01	<0.01	<1	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.03	<0.01	0.02	0.08	0.02	<0.01	<0.01	<1	<1	<0.01	0.06	<1	0.02	0.04	<0.01	<0.01	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	1.04	<1	<1	1.74	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	1.22	<1	<1	1.95	<1	<1	32.10	3.55	<1	4.09	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	<1	<1	4.67	4.73	18.70	3.82	4.90	2.36	1.39	<1	44.40	3.22	1.17	6.64	<1	6.40	2.14	<1	5.60	2.87	41.60	14.50	1.03	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	10.30	7.01	11.70	12.50	70.80	4.99	50.90	9.40	20.40	3.94	104.00	6.03	34.40	27.90	<1	56.00	5.16	4.64	120.00	12.30	112.00	67.00	2.27	<1	<1	<1	<1	32.00
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	1.07	<1	<1	1.59	9.27	<1	8.57	1.42	5.60	<1	10.90	<1	4.61	3.05	<1	<1	<1	<1	<1	1.71	13.80	9.07	<1	<1	<1	<1	<1	6.40
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		11.80	8.07	18.20	19.70	101.00	9.99	64.80	16.20	27.60	5.22	194.00	14.10	40.70	41.80	<5	63.00	8.80	6.04	130.00	17.10	170.00	91.80	<5	<5	<5	<5	<5	38.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		21.60	16.10	51.80	198.00	137.00	73.00	89.30	115.00	46.80	12.40	718.00	73.10	225.00	116.00	<10	63.00	69.20	39.70	130.00	23.50	227.00	109.00	<10	<10	<10	<10	<10	200.00
Organic Matter	M	2625	%	0.4		10.10	4.14	3.64	1.11	13.60	2.50	5.14	20.50	12.90	4.21	5.65	1.14	22.10	98.80	2.20	7.10	11.50	1.45	26.00	3.86	8.36	100.00	2.76	21.00	11.00	6.40	26.00	13.00
Naphthalene	M	2800	mg/kg	0.1	15	0.06	0.02	0.25	0.25	1.33	0.31	0.09	0.13	0.15	0.02	0.87	0.42	<0.01	0.08	0.18	0.59	0.04	0.01	<0.1	0.13	0.65	0.43	0.07	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	N	2800	mg/kg	0.1	170	0.05	<0.01	0.07	0.06	0.51	0.05	0.04	0.01	0.04	<0.01	0.28	0.09	<0.01	<0.01	0.13	0.25	<0.01	<0.01	<0.1	0.10	0.56	0.17	0.02	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	M	2800	mg/kg	0.1	210	<0.01	<0.01	0.03	0.07	0.11	0.02	0.04	0.01	<0.01	<0.01	0.05	0.01	<0.01	<0.01	0.33	0.14	<0.01	<0.01	<0.1	0.01	0.07	0.04	0.02	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	M	2800	mg/kg	0.1	170	<0.01	<0.01	0.08	0.06	0.42	0.02	0.05	0.01	0.03	<0.01	0.23	0.06	<0.01	0.03	0.19	0.24	0.01	<0.01	<0.1	0.11	0.46	0.13	0.03	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	M	2800	mg/kg	0.1	95	0.12	0.04	0.78	2.30	3.88	0.31	0.37	0.27	0.28	0.03	1.93	0.48	<0.02	0.26	3.70	1.20	0.11	0.03	<0.1	0.70	4.26	1.51	0.26	0.20	1.20	1.10	0.59	0.44
Anthracene	M	2800	mg/kg	0.1	2400	0.03	<0.02	0.21	0.26	0.94	0.07	0.09	0.03	0.07	<0.02	0.42	0.10	<0.02	0.04	0.54	0.36	<0.02	<0.02	<0.1	0.13	0.97	0.39	0.07	<0.1	0.20	0.24	0.24	<0.1
Fluoranthene	M	2800	mg/kg	0.1	280	0.30	0.09	1.10	2.06	6.78	0.54	0.75	0.34	0.40	0.03	3.04	0.73	0.16	0.17	5.70	2.30	0.08	0.03	4.00	0.99	6.72	3.04	0.42	0.16	3.00	1.70	1.50	0.29
Pyrene	M	2800	mg/kg	0.1	620	0.26	0.07	0.79	1.41	4.88	0.43	0.66	0.28	0.31	0.03	2.25	0.56	0.26	0.32	5.20	1.60	0.07	0.02	3.20	0.74	4.72	2.42	0.42	0.15	2.70	1.50	1.30	0.20
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	0.18	0.06	0.38	0.72	2.89	0.26	0.51	0.18	0.23	0.02	1.33	0.32	0.11	0.13	4.00	1.50	0.02	0.02	2.60	0.41	2.83	1.80	0.19	0.12	2.10	0.70	0.71	0.11
Chrysene	M	2800	mg/kg	0.1	15	0.16	0.06	0.35	0.86	2.69	0.26	0.59	0.21	0.23	0.02	1.15	0.29	0.15	0.19	3.50	1.60	0.03	0.02	2.00	0.36	2.36	2.00	0.20	0.15	2.90	0.76	0.99	0.17
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	0.39	0.10	0.56	1.03	4.21	0.46	0.91	0.35	0.45	0.03	2.10	0.50	0.21	0.19	5.80	2.50	0.02	0.03	6.10	0.61	3.87	2.78	0.35	<0.1	3.70	0.91	1.50	<0.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.10	0.03	0.19	0.42	1.35	0.14	0.38	0.14	0.13	<0.01	0.68	0.17	<0.01	0.05	2.10	0.61	<0.01	<0.01	1.70	0.21	1.22	0.88	0.12	<0.1	1.30	0.32	0.26	<0.1
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.20	0.06	0.32	0.63	2.90	0.27	0.61	0.17	0.24	0.02	1.36	0.30	0.10	0.09	4.60	1.40	<0.02	<0.02	4.20	0.38	2.31	1.82	0.21	<0.1	2.60	0.75	0.95	<0.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	0.22	0.06	0.30	0.52	2.45	0.23	0.56	0.14	0.23	<0.02	1.18	0.27	<0.02	0.07	4.10	1.30	<0.02	<0.02	<0.1	0.38	2.31	1.44	0.19	<0.1	1.60	0.47	0.75	<0.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.03	<0.02	0.04	0.09	0.37	0.04	0.11	<0.02	0.05	<0.02	0.22	0.05	<0.02	<0.02	0.64	0.43	<0.02	<0.02	<0.1	0.07	0.34	0.35	0.04	<0.1	0.35	<0.1	0.28	<0.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	0.17	0.05	0.25	0.49	2.07	0.21	0.58	0.16	0.21	<0.02	1.09	0.25	<0.02	0.09	3.70	1.30	<0.02	<0.02	<0.1	0.31	1.71	1.41	0.17	<0.1	1.90	0.52	0.73	<0.1
Total Of 16 PAH's	N	2800	mg/kg	2		2.27	0.65	5.71	11.20	37.80	3.62	6.33	2.43	3.04	0.20	18.20	4.60	0.99	1.71	44.00	17.00	0.39	0.15	24.00	5.62	35.30	20.60	2.77	<2	24.00	9.00	9.80	<2
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	0.00	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	0.00	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	0.00	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.1	<0.1	<0.04	<0.04	<0.1	<0.04	<0.04	<0.04	<0.04	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<1	<1	<180	<180	<1	<180	<180	<180	<180	<1	<1	<1	<1	7.60
Toluene	M	2760	µg/kg	1	130000.00	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<1	<1	<140	<140	<1	<140	<140	<140	<140	<1	<1	<1	<1	2.90
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<1	<1	<80	<80	<1	<80	<80	<80	<80	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<1	<1	<200	<200	<1	<200	<200	<200	<200	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<1	<1	<200	<200	<1	<200	<200	<200	<200	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<1	<1	<200	<200	<1	<200	<200	<200	<200	<1	<1	<1	<1	<1

Results - Soil

Client: Rodgers Leask Environmental	Job No.:					210115-27	210115-27	210115-27	210115-27	210114-154	210114-154	22-14900	22-14900	22-14900	22-14900	22-14900	22-29945	22-20454	22-20454	210127-42	210127-42	210206-39	210206-39	210127-42	210127-42	21-41336	21-41336	210114-156	22-31543	22-18735	210212-101	210212-101	210212-101
	Sample ID.:											1415352	1415351	1415353	1415354	1415355	1482832	1440197	1440198							1326717	1326718		1490069	1432305			
	Client Sample Ref.:				Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	AQ25-1	AQ25-2	AQ26-1	AQ26-2	AR21-1	AR21-2	AR25-1	AR26-1	AR26-2	AR24-1	AR24-2	AU29-1	AW37-1	AW37-2	P16-1	P16-2	S19-1	S19-2	R19-1	R19-2	AM31-1	AM30-1	AU28-1	AU32-1	AP23-1	W213-1	W213-2	W213-3
	Sample Type:					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOLID	SOIL	SOIL	SOLID	SOLID	SOLID
	Top Depth (m):					0.20-0.20	1.50-1.50	0.20-0.20	1.50-1.50	0.30-0.30	1.20-1.20	0.4	0.5	1.5	0.3	1.6	0.6			0.30-0.30	1.30-1.30	1.00-1.00	2.00-2.00	0.40-0.40	1.20-1.20	1.1	0.4	0.50-0.50	0.30	1.50	0.20-0.20	0.20-0.20	0.20-0.20
	Bottom Depth (m):											44671	44671	44671	44671	44671		0.30	1.50														
	Date Sampled:					13/01/2021	13/01/2021	13/01/2021	13/01/2021	11/01/2021	11/01/2021	NEW-ASB		NEW-ASB		NEW-ASB	04/08/2022	30/05/2022	30/05/2022	26/01/2021	26/01/2021	04/02/2021	04/02/2021	26/01/2021	26/01/2021	19/11/2021	19/11/2021	13/01/2021	16/08/2022	18/05/2022	11/02/2021	11/02/2021	11/02/2021
	Asbestos Lab:																	DURHAM									COVENTRY		DURHAM				
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A								-		-		-		-					Chrysotile				-	-				
Asbestos Identification	U	2192		N/A		Not Detected	-	Not Detected	-	Not Detected	-	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Not Detected	-	-	Detected	-	Not Detected	Not Detected		-	No Asbestos Detected		Not Detected	-	Not Detected
Asbestos by Gravimetry	U	2192	%	0.001																-	-	-	<0.001	-	-	-							
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		24	8.2	18	6.7	13	11	4.80	6.90	12.00	4.10	12.00	6.90	5.10	11.00	8.6	10	14	16	17	7.4	8.90	3.60	13	1.90	22.00	13	12	18
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Grey	Grey	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Brown	Brown	Dark Brown	Grey	Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	None	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones
Soil Texture	N	2040		N/A								Gravel	Gravel	Gravel	Gravel	Loam	Loam	Sand	Sand							Sand	Sand		Gravel	Sand			
pH at 20C	M	2010	pH units	4		9.53	12.70	9.19	12.70	10.00	10.20	11.20	11.60	10.90	> 12.0	10.20	9.50	11.60	11.10	12.40	12.60	10.10	11.00	9.86	10.90	11.90	> 12.0	9.07	7.60	8.50	8.90	8.74	8.59
Cyanide (Total)	M	2300	mg/kg	0.5		1.06	<1	<1	<1	1.43	9.20	<0.5	0.90	0.60	<0.5	0.60	0.80	<0.5	<0.5	<1	<1	<1	<1	<1	<1	0.70	3.90	<1	<0.5	4.10	<1	2.04	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<12	<12	<12	5.80	2.20	1.70	1.10	38.00	33.00	0.67	0.86	<12	<12	<12	<12	<12	<12	<0.5	1.00	<12	34.00	180.00	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100		98900.00	210000.00	86000.00	253000.00	223000.00	211000.00	38000.00	34000.00	13000.00	35000.00	13000.00	81000.00	17000.00	9800.00	144000.00	127000.00	34500.00	47100.00	160000.00	25700.00	21000.00	21000.00	53200.00	53000.00	15000.00	65400.00	52400.00	76900.00
Arsenic	M	2450	mg/kg	1	37	8.52	<6	8.64	6.23	12.60	12.60	7.90	3.30	4.00	4.60	3.50	12.00	1.40	18.00	78.60	<6	7.62	9.93	14.70	7.60	17.00	41.00	7.86	24.00	4.80	14.40	13.10	20.20
Cadmium	M	2450	mg/kg	0.1	26	1.23	<0.2	0.34	0.79	<0.2	<0.2	<0.1	0.11	<0.1	0.37	<0.1	12.00	0.59	0.26	<0.2	0.63	0.46	<0.2	1.27	0.26	<0.1	0.40	<0.02	5.40	0.24	1.11	0.36	1.39
Chromium	M	2450	mg/kg	1	910	257.00	565.00	255.00	302.00	<9	74.30	27.00	140.00	59.00	380.00	9.70	43.00	160.00	32.00	378.00	546.00	51.00	123.00	21.00	32.00	200.00	1000.00	26.50	190.00	11.00	59.70	50.00	68.50
Manganese	M	2450	mg/kg	5		13100.00	49500.00	13700.00	24100.00	6220.00	9100.00	2000.00	9200.00	4800.00	23000.00	640.00	3300.00	6700.00	2200.00	93900.00	27400.00	3280.00	8070.00	5620.00	2130.00	11000.00	39000.00	4440.00	6400.00	230.00	4490.00	2850.00	4420.00
Copper	M	2450	mg/kg	0.5	2400	25.60	28.50	19.30	20.40	23.10	40.50	13.00	13.00	7.70	44.00	14.00	29.00	9.30	12.00	54.40	22.50	<14	28.00	22.90	14.30	18.00	81.00	15.20	130.00	6.70	31.80	81.90	30.70
Mercury	M	2450	mg/kg	0.1	1.2	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<0.1	<0.1	<0.1	<0.1	<0.1	0.13	<0.05	0.07	<1.4	<1.4	<1	<1	<1.4	<1.4	0.50	2.70	<0.14	8.70	<0.05	<0.1	<1	<0.1
Nickel	M	2450	mg/kg	0.5	1.30E+02	21.80	23.70	20.80	39.00	57.90	71.60	21.00	11.00	5.30	14.00	7.10	22.00	3.20	7.30	50.80	8.48	11.70	18.10	12.50	14.20	10.00	28.00	14.60	41.00	9.40	21.70	27.20	31.90
Lead	M	2450	mg/kg	0.5	2.00E+02	132.00	24.20	121.00	18.90	98.90	117.00	32.00	16.00	12.00	42.00	16.00	360.00	25.00	30.00	55.20	10.10	66.10	64.80	182.00	18.20	24.00	180.00	37.60	72.00	17.00	90.70	142.00	121.00
Selenium	M	2450	mg/kg	0.2	250	<10	27.60	10.70	<10	<10	<10	<0.2	<0.2	6.80	12.00	0.48	1.60	0.31	1.20	71.30	12.70	<10	<10	<10	<10	<0.2	<0.2	1.61	0.40	0.46	1.10	<10	<1
Vanadium	U	2450	mg/kg	5	410	361.00	1960.00	318.00	1300.00	77.70	176.00	140.00	520.00	88.00	370.00	16.00	52.00	110.00	80.00	416.00	473.00	57.30	134.00	82.80	72.50	210.00	780.00	60.30	200.00	15.00	61.60	91.20	142.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	446.00	55.60	359.00	114.00	237.00	314.00	66.00	39.00	22.00	110.00	49.00	690.00	91.00	59.00	95.30	51.70	88.30	113.00	461.00	55.50	53.00	110.00	136.00	820.00	39.00	267.00	376.00	401.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	0.04	<0.01	0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	0.04	0.03	<0.01	<0.01	<0.01	<0.01	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	0.08	<0.01	0.05	<0.01	0.01	0.02	<1	<1	<1	<1	<1	<1	<1	<1	0.04	0.07	<0.01	0.03	<0.01	0.02	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	0.15	<0.01	0.05	<0.01	0.02	0.03	<1	<1	<1	<1	<1	<1	<1	<1	0.09	0.05	<0.01	0.04	<0.01	0.03	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	16.00	<1	19.00	13.00	14.00	<1	<1	<1	<1	<1	2.78	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	3.27	1.44	1.96	<1	<1	<1	23.00	<1	38.00	22.00	20.00	<1	<1	<1	1.64	<1	6.67	1.80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	11.00	9.49	6.42	7.27	4.98	10.50	54.00	<1	35.00	24.00	26.00	<1	<1	<1	5.25	3.98	19.80	9.37	6.89	<1	6.20	<1	1.19	<1	<1	1.15	3.67	1.62
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	46.00	64.50	20.90	51.10	22.10	157.00	350.00	70.00	140.00	100.00	70.00	<1	<1	<1	38.90	31.30	42.50	32.10	25.80	<1	<1	<1	9.02	<1	<1	4.52	10.70	11.70
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	13.30	32.90	4.25	18.20	6.46	41.40	<1	<1	<1	<1	<1	<1	<1	<1	9.52	6.17	6.51	8.59	4.97	<1	<1	<1	1.37	<1	<1	<1	<1	2.07
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		74.50	108.00	33.60	77.40	34.10	211.00	440.00	70.00	230.00	160.00	130.00	<5	<5	<5	56.00	42.60	78.20	52.20	38.80	<5	6.20	<5	11.70	<5	<5	6.44	14.90	15.70
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1	<1	<1	<1	<1	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	0.10	<0.01	0.03	<0.01	0.01	0.02	<1	<1	<1	<1	<1	<1	<1	<1	0.06	0.04	<0.01	0.03	<0.01	0.02	<1	<1	<0.01	<1	<1	<0.01	<0.01	<0.01
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	12.20	<1	2.82	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.40	<1	4.81	2.53	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	14.30	1.08	3.48	<1	<1	<1	2.60	<1	9.60	3.60	4.10	<1	<1	<1	3.02	<1	12.40	4.92	<1	<1	<1	<1	<1	<1	<1	1.97	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	104.00	10.00	30.30	6.19	1.86	7.30	<1	<1	4.40	<1	<1	<1	5.10	<1	13.70	6.53	48.40	19.70	<1	<1	<1	<1	2.34	<1	<1	20.10	4.80	7.80
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	218.00	31.30	125.00	19.60	32.50	67.50	52.00	40.00	58.00	37.00	36.00	<1	44.00	<1	14.70	11.70	100.00	38.20	11.90	<1	<1	<1	17.40	<1	<1	108.00	35.70	40.20
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	24.10	6.46	15.20	2.60	1.88	2.56	5.90	<1	7.20	<1	5.00	<1	<1	<1	<1	<1	4.81	2.88	<1	<1	<1	<1	1.34	<1	<1	10.20	12.40	4.94
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		372.00	49.20	177.00	28.80	36.40	77.70	61.00	40.00	80.00	40.00	45.00	<5	49.00	<5	33.80	20.10	171.00	68.30	13.90	<5	<5	<5	21.00	<5	<5	141.00	53.20	53.80
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		447.00	158.00	211.00	106.00	70.60	288.00	510.00	110.00	310.00	200.00	170.00	<10	49.00	<10	90.00	62.90	249.00	121.00	52.70	<10	<10	<10	32.70	<10	<10	147.00	68.00	69.50
Organic Matter	M	2625	%	0.4		19.10	1.57	7.38	0.92	15.50	18.10	0.81	2.10	7.60	6.20	62.00	28.00	1.70	8.10	18.80	2.16	62.90	33.60	4.53	5.74	2.40	2.10	3.28	12.00	7.10	6.74	7.69	6.02
Naphthalene	M	2800	mg/kg	0.1	15	7.62	1.23	3.89	0.20	0.13	0.21	<0.1	0.73	2.10	<0.1	<0.1	<0.1	0.41	<0.1	0.78	0.39	3.27	3.63	0.18	0.02	<0.1	<0.1	<0.01	<0.1	<0.1	0.18	0.16	0.30
Acenaphthylene	N	2800	mg/kg	0.1	170	1.88	0.83	0.83	0.14	0.04	0.07	<0.1	0.14	0.11	<0.1	<0.1	<0.1	0.47	<0.1	0.37	0.26	1.81	5.69	0.04	<0.01	<0.1	<0.1	<0.01	<0.1	<0.1	0.14	0.22	0.27
Acenaphthene	M	2800	mg/kg	0.1	210	0.26	0.20	0.21	0.14	0.01	0.03	<0.1	0.27	0.23	<0.1	<0.1	<0.1	0.45	<0.1	0.01	0.02	0.18	0.42	0.02	<0.01	<0.1	<0.1	<0.01	<0.1	<0.1	0.23	0.12	0.33
Fluorene	M	2800	mg/kg	0.1	170	1.69	1.05	0.76	0.15	0.02	0.05	<0.1	0.16	0.30	<0.1	<0.1	<0.1	0.34	<0.1	0.08	0.15	1.22	6.78	0.04	<0.01	<0.1	<0.1	<0.01	<0.1	<0.1	0.21	0.24	0.44
Phenanthrene	M	2800	mg/kg	0.1	95	13.90	10.40	6.66	3.29	0.41	1.79	0.35	2.20	1.60	0.70	1.80	0.75	3.00	0.47	2.43	3.04	11.80	36.40	0.28	0.05	<0.1	0.38	<0.02	<0.1	<0.1	1.74	1.80	2.92
Anthracene	M	2800	mg/kg	0.1	2400	3.19	1.95	1.42	0.46	0.09	0.40	<0.1	0.40	0.35	<0.1	0.10	0.20	1.10	<0.1	0.43	1.22	2.37	7.66	0.06	<0.02	<0.1	0.26	<0.02	<0.1	<0.1	0.45	1.11	0.81
Fluoranthene	M	2800	mg/kg	0.1	280	20.80	11.90	11.10	3.38	0.85	3.42	0.55	4.20	1.40	1.30	0.21	0.47	8.00	0.58	1.78	3.66	16.90	42.00	0.33	0.04	0.84	0.74	<0.02	<0.1	0.32	4.59	12.70	5.25
Pyrene	M	2800	mg/kg	0.1	620	14.20	8.11	8.06	2.39	0.64	2.41	0.40	3.50	1.00	1.20	0.26	0.54	7.30	0.60	1.13	2.40	12.00	28.90	0.27	0.03	0.89	0.58	<0.02	<0.1	0.24	3.61	10.40	3.73
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	7.60	4.79	4.41	1.65	0.44	1.40	0.13	2.40	0.64	0.64	<0.1	<0.1	5.40	0.37	0.56	1.56	7.07	13.70	0.18	0.02	0.69	0.42	<0.01	<0.1	<0.1	2.58	9.05	2.90
Chrysene	M	2800	mg/kg	0.1	15	6.16	4.70	3.82	1.68	0.43	1.29	0.17	2.90	0.70	0.71	0.57	<0.1	6.30	0.49	0.46	1.32	6.69	12.00	0.17	0.02	0.77	0.55	<0.01	<0.1	<0.1	2.41	9.16	2.60
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	10.60	5.93	6.83	2.29	0.74	1.87	<0.1	4.20	0.57	1.30	<0.1	<0.1	9.00	0.42	0.39	1.53	8.55	15.70	0.28	0.02	1.10	0.48	<0.02	<0.1	<0.1	3.85	12.30	4.25
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	3.74	2.16	2.30	0.77	0.25	0.54	<0.1	1.60	0.15	1.20	<0.1	<0.1	4.00	0.25	0.19	0.56	3.23	5.31	0.08	<0.01	0.50	0.18	<0.01	<0.1	<0.1	1.48	4.19	1.27
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	6.21	4.09	3.97	1.33	0.44	1.26	<0.1	3.40	0.47	0.91	<0.1	<0.1	8.20	0.42	0.35	1.06	5.23	10.10	0.16	0.02	0.93	0.13	<0.02	<0.1	<0.1	2.31	7.01	2.44
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	5.25	3.43	3.70	1.15	0.42	0.98	<0.1	2.40	0.28	0.71	<0.1	<0.1	5.30	<0.1	0.29	0.86	3.04	7.00	0.16	<0.02	<0.1	<0.1	<0.02	<0.1	<0.1	1.73	4.94	1.93
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.68	0.69	0.45	0.26	0.09	0.22	<0.1	0.46	0.16	<0.1	<0.1	<0.1	0.74	<0.1	0.06	0.16	0.81	1.17	0.03	<0.02	<0.1	<0.1	<0.02	<0.1	<0.1	0.34	1.05	0.36
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	4.23	2.93	3.04	1.01	0.39	0.93	<0.1	2.20	0.38	0.79	<0.1	<0.1	5.20	<0.1	0.23	0.65	3.23	6.44	0.12	<0.02	<0.1	<0.1	<0.02	<0.1	<0.1	1.45	3.81	1.57
Total Of 16 PAH's	N	2800	mg/kg	2		108.00	64.40	61.40	20.30	5.38	16.90	<2	31.00	10.00	9.50	2.90	<2	65.00	3.60	9.53	18.80	87.30	203.00	2.40	0.23	5.70	3.70	<0.12	<2	<2	27.30	78.20	31.40
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00
Phenol	M	2920	mg/kg	0.02	280	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	0.32	<0.02	<0.02	<0.02	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	0.06	<0.02	<0.02	<0.02	0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.00	0.00	0.00	0.00	0.00	0.00	<0.02	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.1	<0.1	<0.1	<0.1	0.57	<0.1	<0.1	<0.1	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.1	<0.1	<0.04	<0.1	<0.1	<0.04	<0.04	<0.04
Benzene	M	2760	µg/kg	1	87.00	<180	<180	<180	<180	<180	<180	<1	<1	8.90	<1	63.00	<1	<1	<1	<180	<180	<180	<180	<180	<180	<1	<1	<180	<1	<1	<180	<180	<180
Toluene	M	2760	µg/kg	1	130000.00	<140	<140	<140	<140	<140	<140	<1	<1	2.30	<1	17.00	<1	<1	<1	<140	<140	<140	<140	<140	<140	<1	<1	<140	<1	<1	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<80	<80	<80	<80	<80	<1	<1	<1	<1	<1	<1	<1	<1	<80	<80	<80	<80	<80	<80	<1	<1	<80	<1	<1	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<200	<200	<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<1	<1	<200	<1	<1	<200	<200	<200
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<200	<200	<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<1	<1	<200	<1	<1	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<200	<200	<200	<200	<200	<200	<1	<1	<1	<1	<1	<1	<1	<1	<200	<200	<200	<200	<200	<200	<1	<1	<200	<1	<1	<200	<200	<200

Results - Soil

Client: Rodgers Leask Environmental					Job No.:		210212-101	210212-101	210212-101	210212-101	210212-101	22-31543	210130-32	22-14900	22-14900	210114-156	210114-156	210114-156	210203-41	21-41336	22-16145	22-34126	22-34126	22-42945	22-42945	22-42945	22-42945	22-34126	22-34126	22-34996	22-34996	22-34996	22-34996	22-35446
					Sample ID.:	Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)	1490066					1415360		1415361						1326710	1420846	1501688	1501689	1541583	1541584	1541585	1541586	1501690	1501691	1505521	1505522	1505523	1505524	1507545
					Client Sample Ref.:		W213-4	W213-5	W213-6	W213-7	W213-8	AQ23-2	AL32-1	AR22-1	AR22-2	AV28-1	AV28-2	AV28-3	T19-1	AP31-1	AP31-1	5E1-SV1	5E1-SV2	5E1-SV2-N	5E1-SV2-S	5E1-SV2-E	5E1-SV2-W	5E1-SV3	5E1-SV4	5e1-SV5	5e1-SV6	5e1-SV7	5e1-SV8	5E1-SV9
					Sample Type:		SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOLID	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):		0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	1.00	0.50-0.50	0.9	1.8	0.30-0.30	1.20-1.20	2.20-2.20	0.30-0.30	0.3	1.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2					0.2
					Bottom Depth (m):									44671	44671						1.5			0.2	0.2	0.2	0.2							
					Date Sampled:		11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	16/08/2022	1/28/2021		NEW-ASB	13/01/2021	13/01/2021	13/01/2021	2/1/2021	19/11/2021	28/04/2022	05/09/2022	05/09/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	08/11/2022	05/09/2022	05/09/2022	08/09/2022	08/09/2022	08/09/2022	08/09/2022	14/09/2022
					Asbestos Lab:															COVENTRY	NEW-ASB	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A															Chrysotile			-	Chrysotile	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A		-	Not Detected	-	Not Detected	-		Not Detected		No Asbestos Detected	Not Detected	-	Not Detected	Detected		No Asbestos Detected	No Asbestos Detected	Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001														0.016				0.04											
Total Asbestos	U	2192	%	0.001																													
Moisture	N	2030	%	0.02		9.8	13	14	14	11	2.30	9.4	7.20	5.90	9.80	19.00	21.00	7.60	11.00	7.10	4.80	5.70						6.80	5.70	5.40	8.00	8.30	4.10	7.50
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Brown	Black	Brown	Brown	Dark Brown	Black	Black	Dark Brown	Brown	Brown	Black	Black						Brown	Brown	Grey	Grey	Grey	Brown	Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones						Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones and Roots
Soil Texture	N	2040		N/A							Gravel		Loam	Gravel					Sand	Sand	Sand	Sand						Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C	M	2010	pH units	4		8.63	8.86	8.56	8.68	10.70	7.80	11.30	9.80	10.80	9.40	11.50	11.30	10.40	10.20	11.50	8.40	9.80						8.70	8.40	9.20	8.90	8.80	9.00	9.10
Cyanide (Total)	M	2300	mg/kg	0.5		<1	<1	1.43	<1	<1	<0.5	<1	0.50	<0.5	<1	<1	<1	<1	<0.5	<0.5	0.50	1.10						2.10	1.50	<0.5	1.40	2.10	0.60	1.80
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		<12	<12	<12	<12	<12	6.70	<12	6.90	3.70	<12	<12	<12	<12	<0.5	<0.5	1.40	2.10						4.40	1.70	6.10	1.50	1.20	1.40	4.10
Iron (Total)	N	2430	mg/kg	100		33400.00	45900.00	86800.00	86900.00	105000.00	58000.00	138000.00	19000.00	12000.00	208000.00	143000.00	146000.00	60800.00	19000.00	46000.00	62000.00	75000.00						52000.00	120000.00	76000.00	57000.00	57000.00	57000.00	67000.00
Arsenic	M	2450	mg/kg	1	37	9.93	67.00	14.60	13.00	6.51	5.70	8.28	6.10	1.80	7.62	9.80	11.70	<6	19.00	8.80	5.00	<0.5						8.80	12.00	9.80	5.40	5.70	10.00	18.00
Cadmium	M	2450	mg/kg	0.1	26	<0.2	0.58	0.33	1.39	<0.2	<0.1	1.87	0.62	0.12	0.80	<0.2	<0.2	0.42	<0.1	0.38	0.18	<0.1						0.32	0.24	0.43	0.22	0.31	0.41	0.76
Chromium	M	2450	mg/kg	1	910	34.20	18.60	111.00	162.00	267.00	28.00	160.00	50.00	45.00	219.00	<9	<9	17.60	67.00	270.00	450.00	<0.5						72.00	180.00	60.00	33.00	51.00	52.00	82.00
Manganese	M	2450	mg/kg	5		2050.00	657.00	5460.00	12000.00	12600.00	1100.00	12900.00	8900.00	3000.00	8970.00	4270.00	4290.00	2630.00	4300.00	25000.00	12000.00	9.70						3500.00	6400.00	3200.00	1600.00	2100.00	2200.00	4800.00
Copper	M	2450	mg/kg	0.5	2400	27.80	91.40	29.70	26.30	20.80	9.10	20.40	12.00	4.90	19.10	19.60	17.80	<14	60.00	46.00	19.00	<0.5						16.00	66.00	22.00	11.00	14.00	36.00	35.00
Mercury	M	2450	mg/kg	0.1	1.2	<1	<0.1	<1	<0.1	<1	<0.05	<1	<0.1	<0.1	<1.4	<1.4	<1.4	<1	0.14	<0.05	0.10	<0.05						0.13	0.08	0.09	0.08	0.10	0.08	0.24
Nickel	M	2450	mg/kg	0.5	1.30E+02	18.90	24.50	28.50	19.30	13.30	18.00	34.60	12.00	5.80	29.50	20.70	21.30	13.10	9.90	30.00	38.00	<0.5						17.00	44.00	16.00	9.90	14.00	18.00	27.00
Lead	M	2450	mg/kg	0.5	2.00E+02	42.60	253.00	174.00	85.10	54.20	28.00	37.60	38.00	7.10	29.10	51.40	74.00	26.90	23.00	84.00	29.00	<0.5						50.00	33.00	52.00	31.00	57.00	57.00	120.00
Selenium	M	2450	mg/kg	0.2	250	<10	<1	<10	3.36	<10	<0.25	<10	1.70	0.32	<10	<10	<10	<10	<0.2	1.30	1.40	<0.25						1.30	1.50	1.40	0.68	1.00	1.20	1.90
Vanadium	U	2450	mg/kg	5	410	45.40	34.00	164.00	385.00	380.00	36.00	157.00	75.00	130.00	146.00	64.60	69.00	52.40	95.00	470.00	230.00	<0.5						99.00	130.00	85.00	46.00	57.00	64.00	150.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	103.00	207.00	400.00	278.00	141.00	100.00	98.70	130.00	24.00	180.00	128.00	170.00	80.00	45.00	130.00	79.00	<0.5						150.00	76.00	120.00	84.00	100.00	140.00	270.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	0.01	<0.01	<0.01	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	0.04	<0.01	0.03	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	0.04	<0.01	0.02	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	3.27	<1	<1	<1	<1	<1	<1	12.00	12.00	<1	<1	<1	1.53	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	11.30	<1	<1	<1	3.16	<1	<1	34.00	21.00	<1	2.05	1.17	6.42	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	50.50	1.73	1.41	1.16	17.30	<1	4.38	31.00	21.00	1.79	6.72	6.34	19.70	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	2660.00	6.16	10.50	8.80	42.20	<1	18.70	99.00	72.00	8.62	12.40	10.80	68.10	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	319.00	<1	1.14	<1	12.00	<1	<1	<1	<1	<1	2.22	1.30	60.40	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		3040.00	8.34	13.30	10.60	74.90	<5	24.30	180.00	130.00	11.30	23.40	19.60	156.00	<5	<5	<5	<5						<5	<5	<5	<5	<5	<5	<5
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	<0.01	<0.01	<0.01	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<0.01	<1	<1	<0.01	0.02	<0.01	0.02	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	9.95	<1	<1	<1	<1	<1	<1	<1	1.27	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	4.44	<1	<1	1.23	6.32	<1	<1	4.00	7.50	<1	1.64	<1	5.43	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	15.30	7.29	10.70	9.35	33.40	<1	<1	<1	45.00	1.89	3.73	2.72	15.00	<1	<1	<1	<1						23.00	<1	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	24.80	183.00	55.00	38.10	93.20	<1	43.50	33.00	250.00	15.20	12.30	10.50	50.70	<1	<1	<1	<1						59.00	<1	<1	<1	<1	<1	<1
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	5.27	6.29	2.87	10.40	<1	1.00	6.00	<1	2.53	<1	<1	4.24	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		46.20	196.00	72.60	51.80	153.00	<5	45.20	43.00	310.00	19.80	18.70	15.10	76.70	<5	<5	<5	<5						83.00	<5	<5	<5	<5	<5	<5
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		3090.00	204.00	85.90	62.50	228.00	<10	69.50	220.00	430.00	31.10	42.20	34.70	233.00	<10	<10	<10	<10						83.00	<10	<10	<10	<10	<10	<10
Organic Matter	M	2625	%	0.4		22.20	8.21	7.55	7.76	25.20	1.80	18.10	2.80	1.70	26.00	49.10	44.00	13.30	1.20	3.10	25.00	18.00						15.00	22.00	23.00	19.00	19.00	20.00	13.00
Naphthalene	M	2800	mg/kg	0.1	15	0.43	<0.01	0.25	0.31	8.43	<0.1	0.04	<0.1	<0.1	0.05	0.10	0.05	0.53	<0.1	<0.1	<0.1	2.50						4.20	1.50	2.50	2.70	3.50	2.60	<0.1
Acenaphthylene	N	2800	mg/kg	0.1	170	0.28	<0.01	0.20	0.20	1.29	<0.1	0.04	<0.1	<0.1	0.03	0.02	<0.01	0.22	<0.1	<0.1	<0.1	0.46						0.82	0.33	0.33	0.48	0.98	0.44	<0.1
Acenaphthene	M	2800	mg/kg	0.1	210	0.02	<0.01	0.10	<0.01	0.27	<0.1	<0.01	<0.1	<0.1	0.01	0.06	0.01	0.02	<0.1	<0.1	<0.1	0.21						0.17	0.18	0.16	0.18	0.24	0.76	<0.1
Fluorene	M	2800	mg/kg	0.1	170	0.20	<0.01	0.14	0.13	0.84	<0.1	0.01	<0.1	<0.1	0.02	0.21	0.03	0.11	<0.1	<0.1	<0.1	0.38						0.43	0.32	0.34	0.42	0.54	0.93	<0.1
Phenanthrene	M	2800	mg/kg	0.1	95	1.94	0.99	1.09	0.99	5.74	<0.1	0.14	<0.1	<0.1	0.29	0.44	0.18	1.26	0.34	<0.1	1.20	2.20						2.30	1.80	1.90	2.60	3.00	5.90	0.71
Anthracene	M	2800	mg/kg	0.1	2400	0.48	<0.02	0.31	0.29	1.81	<0.1	0.04	<0.1	<0.1	0.07	0.08	0.04	0.31	0.12	<0.1	0.49	0.81						1.10	0.63	0.74	0.84	1.30	1.80	0.50
Fluoranthene	M	2800	mg/kg	0.1	280	3.70	1.98	2.66	2.60	8.49	<0.1	0.35	0.23	0.23	0.42	0.35	0.27	1.96	0.90	<0.1	2.50	4.60						5.30	3.80	3.10	4.40	6.70	8.70	2.50
Pyrene	M	2800	mg/kg	0.1	620	2.58	1.51	2.04	1.97	6.29	<0.1	0.28	0.22	0.24	0.32	0.31	0.23	1.48	1.20	<0.1	1.90	3.50						5.30	2.90	2.70	3.30	5.80	6.40	2.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	1.10	1.12	1.66	1.36	3.52	<0.1	0.24	<0.1	0.14	0.23	0.26	0.20	0.94	0.91	<0.1	1.10	2.10						3.50	1.50	1.80	2.30	4.90	3.30	1.30
Chrysene	M	2800	mg/kg	0.1	15	0.98	1.11	1.51	1.44	3.58	<0.1	0.21	<0.1	0.16	0.25	0.26	0.22	0.99	1.00	<0.1	1.50	2.80						4.50	2.00	1.60	2.30	5.30	3.50	1.40
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	1.40	1.85	2.67	2.26	4.87	<0.1	0.43	<0.1	<0.1	0.23	0.38	0.32	1.45	2.40	<0.1	1.50	2.90						5.20	2.10	2.80	4.00	7.60	4.90	1.80
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	0.48	0.61	0.96	0.77	1.60	<0.1	0.13	<0.1	<0.1	0.09	0.14	0.10	0.42	0.61	<0.1	0.46	1.00						1.80	0.76	0.87	1.30	2.50	1.60	0.63
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	0.78	0.95	1.64	1.27	3.22	<0.1	0.27	<0.1	<0.1	0.18	0.31	0.22	0.78	1.30	<0.1	0.99	1.90						3.90	1.40	1.90	3.20	5.70	3.50	1.30
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	0.69	0.79	1.34	1.09	2.53	<0.1	0.27	<0.1	<0.1	0.13	0.20	0.14	0.54	1.40	<0.1	<0.1	1.60						3.10	<0.1	1.30	2.00	4.10	2.40	0.95
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	0.12	<0.02	0.23	0.28	0.55	<0.1	0.05	<0.1	<0.1	0.04	0.06	0.04	0.14	0.34	<0.1	<0.1	0.40						0.64	<0.1	0.33	0.40	0.93	0.59	0.17
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	0.58	0.69	1.14	0.99	2.31	<0.1	0.23	<0.1	<0.1	0.14	0.21	0.15	0.53	1.20	<0.1	<0.1	1.70						3.10	<0.1	1.30	2.00	4.00	2.40	0.84
Total Of 16 PAH's	N	2800	mg/kg	2		15.80	11.60	17.90	15.90	55.30	<2	2.73	<2	<2	2.50	3.39	2.19	11.70	12.00	<2	12.00	29.00						45.00	19.00	24.00	32.00	57.00	50.00	14.00
Resorcinol	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280	<0.01	<0.01	<0.01	<0.01	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02		<0.01	<0.01	<0.01	<0.01	0.01	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02		0.00	0.00	0.00	0.00	0.00	<0.02	0.00	<0.02	<0.02	0.00	0.00	0.00	0.00	<0.02	<0.02	<0.02	<0.02						<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1		<0.04	<0.04	<0.04	<0.04	<0.04	<0.1	<0.04	<0.1	<0.1	<0.04	<0.04	<0.04	<0.04	<0.1	<0.1	<0.1	<0.1						<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00	<180	<180	<180	<180	<180	<1	<180	<1	<1	<180	<180	<180	<180	<1	<1	3.60	<1						<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00	<140	<140	<140	<140	<140	<1	<140	<1	<1	<140	<140	<140	<140	<1	<1	1.40	<1						1.70	1.30	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00	<80	<80	<80	<80	<80	<1	<80	<1	<1	<80	<80	<80	<80	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00	<200	<200	<200	<200	<200	<1	<200	<1	<1	<200	<200	<200	<200	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00	<200	<200	<200	<200	<200	<1	<200	<1	<1	<200	<200	<200	<200	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<200	<200	<200	<200	<200	<1	<200	<1	<1	<200	<200	<200	<200	<1	<1	<1	<1						<1	<1	<1	<1	<1	<1	<1

Results - Soil

						Surface Validation Samples																Clay Validation Samples									
Client: Rodgers Leask Environmental				**Job No.:**		22-35446	22-35770	22-35770	22-35770	22-36111	22-36111	22-36111	22-36111	22-37311	22-37311	22-37311	22-37311	22-37311	22-37307	22-37307	22-37307	22-37307	22-20938	22-20938	22-20938	22-31543	22-31543	22-26760	22-20938	22-24643	21-41336	22-19583
				Sample ID.:	**Generic Assessment Criteria Residential End Use with Homegrown Produce (SOM 1%)**	1507546	1508865	1508866	1508867	1510439	1510440	1510441	1510442	1515791	1515792	1515793	1515794	1515795	1515774	1515775	1515776	1515777	1442556	1442557	1442558	1490081	1490080	1468360	1442555	1458824	1326708	1435996
				Client Sample Ref.:		5E1-SV10	5ES-SV11	5E1-SV12	5E1-SV13	5E1-SV14	5E1-SV15	5E1-SV16	5E1-SV17	5E1-SV18	5E1-SV19	5E1-SV20	5E1-SV21	5E1-SV22	5E1-SV23	5E1-SV24	5E1-SV25	5E1-SV26	AN25-C	AP29-C	AQ25-C	AJ22-C	AS27-C	AO28-C	AN29-C	AQ30-C	AR30-1	AJ29-C
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.5	0.5	0.5	-	-	-	0.5	-	0.5	-
				Bottom Depth (m):																							-			-		
				Date Sampled:		14/09/2022	15/09/2022	15/09/2022	15/09/2022	20/09/2022	20/09/2022	20/09/2022	20/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	27/09/2022	06/06/2022	06/06/2022	06/06/2022	16/08/2022	16/08/2022	13/07/2022	06/06/2022	29/06/2022	19/11/2021	24/05/2022
				Asbestos Lab:		NEW-ASB	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	COVENTRY	COVENTRY	COVENTRY	COVENTRY	-	DURHAM			DURHAM	DURHAM	DURHAM	COVENTRY	COVENTRY	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	-	No Asbestos Detected	-	-	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	-	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001																			-		-	-					
Total Asbestos	U	2192	%	0.001																											
Moisture	N	2030	%	0.02		7.90	5.20	3.80	6.60	6.30	5.40	5.60	5.30	6.20	6.00	5.00	6.60	6.10	4.90	5.20	4.70	3.70	33.00	34.00	31.00	10.00	15.00	26.00	28.00	25.00	11.00	25.00
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Grey	Brown	Grey	Grey	Brown	Brown	Grey
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones and Roots	Roots and Stones	Stones	Stones	Stones	Stones	None	None	None	None	None	Stones	None	None	Stones	Stones
Soil Texture	N	2040		N/A		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Sand	Clay
pH at 20C	M	2010	pH units	4		9.00	10.30	9.20	9.50	9.10	9.00	9.20	9.20	9.10	9.20	9.50	9.00	9.10	9.20	9.10	9.20	8.90	8.70	8.60	8.50	8.20	8.20	8.50	8.70	9.10	10.70	8.10
Cyanide (Total)	M	2300	mg/kg	0.5		1.60	1.20	0.90	1.70	1.00	1.60	1.50	0.90	1.60	2.10	5.10	1.40	1.10	0.70	1.30	1.70	1.30	<0.5	<0.5	<0.5	1.40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.5		1.60	12.00	6.80	8.60	2.50	1.40	<0.5	2.60	1.10	1.60	0.55	14.00	0.93	1.70	1.60	0.86	0.86	58.00	130.00	190.00	36.00	38.00	180.00	120.00	86.00	<0.5	50.00
Iron (Total)	N	2430	mg/kg	100		50000.00	37000.00	52000.00	21000.00	37000.00	35000.00	50000.00	60000.00	41000.00	52000.00	61000.00	30000.00	52000.00	40000.00	35000.00	59000.00	81000.00	26000.00	26000.00	29000.00	25000.00	42000.00	28000.00	30000.00	21000.00	7500.00	22000.00
Arsenic	M	2450	mg/kg	1	37	12.00	7.00	9.20	16.00	15.00	19.00	14.00	14.00	6.20	8.60	9.00	7.90	7.10	6.80	5.70	9.70	10.00	3.70	5.30	14.00	3.40	3.30	13.00	11.00	9.20	15.00	14.00
Cadmium	M	2450	mg/kg	0.1	26	0.51	0.37	0.54	0.60	0.49	1.90	0.65	1.20	0.26	0.35	0.55	0.30	0.39	0.28	0.18	0.63	0.65	0.21	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	M	2450	mg/kg	1	910	51.00	47.00	52.00	73.00	55.00	40.00	59.00	65.00	71.00	100.00	160.00	38.00	73.00	30.00	29.00	98.00	220.00	21.00	18.00	26.00	7.40	12.00	29.00	19.00	22.00	19.00	28.00
Manganese	M	2450	mg/kg	5		2900.00	2900.00	3900.00	3900.00	3700.00	8500.00	4300.00	5200.00	3900.00	5600.00	7200.00	1700.00	3600.00	1900.00	1900.00	4900.00	8200.00	430.00	210.00	380.00	830.00	370.00	380.00	240.00	200.00	3100.00	370.00
Copper	M	2450	mg/kg	0.5	2400	20.00	15.00	25.00	27.00	22.00	22.00	33.00	32.00	11.00	16.00	27.00	21.00	18.00	12.00	13.00	34.00	25.00	8.80	7.60	8.10	11.00	4.30	9.60	5.80	8.30	23.00	8.40
Mercury	M	2450	mg/kg	0.1	1.2	0.22	0.19	0.23	0.17	0.20	0.12	0.94	0.26	0.08	0.12	0.24	0.11	0.11	0.07	0.05	0.20	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05
Nickel	M	2450	mg/kg	0.5	1.30E+02	21.00	11.00	18.00	24.00	22.00	21.00	30.00	23.00	11.00	18.00	20.00	17.00	15.00	12.00	9.80	29.00	23.00	19.00	16.00	21.00	8.50	11.00	28.00	18.00	18.00	8.30	25.00
Lead	M	2450	mg/kg	0.5	2.00E+02	65.00	54.00	82.00	99.00	71.00	110.00	91.00	140.00	27.00	45.00	77.00	36.00	61.00	37.00	28.00	87.00	86.00	14.00	13.00	17.00	49.00	11.00	20.00	15.00	16.00	7.50	18.00
Selenium	M	2450	mg/kg	0.2	250	1.40	1.10	1.50	2.00	1.90	1.70	1.80	4.80	0.96	1.50	1.60	1.10	1.50	1.30	0.99	1.60	1.40	0.37	0.54	0.70	<0.25	<0.25	0.85	0.59	0.65	<0.2	0.86
Vanadium	U	2450	mg/kg	5	410	64.00	56.00	85.00	100.00	77.00	67.00	83.00	89.00	79.00	100.00	190.00	50.00	91.00	48.00	50.00	120.00	160.00	20.00	22.00	33.00	8.50	19.00	36.00	28.00	27.00	23.00	34.00
Zinc	M	2450	mg/kg	0.5	3.70E+03	160.00	140.00	210.00	220.00	170.00	610.00	250.00	360.00	86.00	110.00	250.00	74.00	140.00	87.00	73.00	260.00	250.00	52.00	45.00	55.00	36.00	31.00	72.00	47.00	59.00	24.00	58.00
Aliphatic VPH >C5-C6	M	2680	mg/kg	1	42	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C6-C8	N	2680	mg/kg	1	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic VPH >C8-C10	M	2680	mg/kg	1	27	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C10-C12	M	2680	mg/kg	1	1.30E+02	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C12-C16	M	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C16-C21	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	110.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C21-C35	M	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	410.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic EPH >C35-C44	N	2680	mg/kg	1	6.50E+04	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5		<5	<5	<5	<5	<5	<5	<5	520.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Aromatic VPH >C5-C7	M	2680	mg/kg	1	70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C7-C8	M	2680	mg/kg	1	130	<1	<1	<1	<1	<1	<1	<1	3.10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic VPH >C8-C10	M	2680	mg/kg	1	34	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C10-C12	M	2680	mg/kg	1	74	<1	<1	<1	<1	<1	<1	<1	9.40	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C12-C16	M	2680	mg/kg	1	140	<1	<1	<1	<1	<1	<1	<1	6.70	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C16-C21	N	2680	mg/kg	1	260	<1	12.00	<1	<1	<1	<1	15.00	23.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C21-C35	M	2680	mg/kg	1	1.10E+03	<1	73.00	<1	<1	<1	<1	18.00	220.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic EPH >C35-C44	N	2680	mg/kg	1	1.10E+03	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Aromatic Hydrocarbons	M	2680	mg/kg	5		<5	85.00	<5	<5	<5	<5	33.00	260.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Total Petroleum Hydrocarbons	N	2680	mg/kg	10		<10	85.00	<10	<10	<10	<10	33.00	780.00	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Organic Matter	M	2625	%	0.4		29.00	7.00	6.30	20.00	18.00	8.90	16.00	8.40	26.00	9.00	8.90	12.00	12.00	27.00	30.00	9.40	13.00	2.20	4.30	2.20	0.97	0.67	4.10	2.40	2.40	0.69	1.60
Naphthalene	M	2800	mg/kg	0.1	15	1.80	0.31	5.10	3.10	<0.1	1.40	2.50	4.60	1.50	2.60	0.84	<0.1	3.10	<0.1	0.93	1.90	1.60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	N	2800	mg/kg	0.1	170	0.48	0.56	1.20	0.70	<0.1	0.33	0.59	1.10	0.38	0.56	0.34	<0.1	0.65	<0.1	0.28	0.68	0.55	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	M	2800	mg/kg	0.1	210	0.20	0.17	0.62	0.26	<0.1	0.21	0.19	0.17	0.22	0.13	0.10	<0.1	0.13	<0.1	0.12	0.17	0.16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	M	2800	mg/kg	0.1	170	0.34	0.50	1.10	0.58	<0.1	0.40	0.47	0.60	0.40	0.34	0.34	<0.1	0.37	<0.1	0.25	0.57	0.43	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	M	2800	mg/kg	0.1	95	1.90	8.30	5.90	4.90	1.30	2.80	2.50	5.50	1.70	2.80	2.70	1.00	2.10	1.10	1.50	4.30	4.70	1.40	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.60	<0.1
Anthracene	M	2800	mg/kg	0.1	2400	0.68	1.30	1.80	1.10	0.43	0.80	0.98	1.50	0.64	0.79	0.49	0.29	0.87	0.31	0.51	1.20	1.50	0.45	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.93	<0.1
Fluoranthene	M	2800	mg/kg	0.1	280	3.90	11.00	13.00	10.00	2.30	4.60	4.90	10.00	3.50	5.70	4.00	1.40	4.20	1.80	3.10	8.10	8.50	2.80	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.20	<0.1
Pyrene	M	2800	mg/kg	0.1	620	3.40	7.80	9.30	7.70	1.90	3.70	4.10	8.20	2.90	4.20	2.90	1.10	3.70	1.50	2.40	5.80	6.00	2.50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.40	<0.1
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2	2.30	3.80	5.90	4.90	1.20	1.80	3.00	5.40	2.20	3.10	1.70	0.87	3.00	0.95	1.90	3.90	3.70	1.60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.10	<0.1
Chrysene	M	2800	mg/kg	0.1	15	2.60	4.20	6.00	5.40	1.20	1.80	3.10	5.30	2.10	3.20	1.30	1.00	3.10	1.00	2.00	3.70	3.70	1.50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.00	<0.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6	4.00	5.70	8.40	8.00	1.80	3.00	4.40	7.30	3.40	5.00	2.20	1.20	4.30	1.40	3.00	5.60	5.00	1.60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.10	<0.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77	1.30	2.20	2.60	2.50	0.60	1.10	1.50	2.50	1.10	1.60	0.61	0.40	1.40	0.48	0.85	1.90	1.70	0.75	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.37	<0.1
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2	2.60	4.20	6.40	6.40	1.40	2.30	3.40	5.30	2.40	3.80	1.60	0.94	3.40	1.20	2.30	4.40	4.10	1.60	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.97	<0.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27	<0.1	2.70	4.40	4.50	<0.1	1.60	2.40	3.80	1.80	3.10	<0.1	0.80	2.50	0.93	1.60	3.10	3.20	1.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24	<0.1	0.42	0.83	0.91	<0.1	0.27	0.41	0.76	0.25	0.54	<0.1	0.20	0.50	0.22	0.40	0.47	0.53	0.67	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320	<0.1	2.50	4.30	4.00	<0.1	1.50	2.10	3.30	1.50	2.60	<0.1	0.68	2.20	0.69	1.50	2.50	2.50	1.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Of 16 PAH's	N	2800	mg/kg	2		26.00	56.00	77.00	65.00	12.00	28.00	37.00	65.00	26.00	40.00	19.00	9.90	36.00	12.00	23.00	48.00	48.00	17.00	<2	<2	<2	<2	<2	<2	<2	13.00	<2
Resorcinol	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phenol	M	2920	mg/kg	0.02	280	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Cresols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Naphthol	N	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trimethylphenols	M	2920	mg/kg	0.02		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Phenols	M	2920	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene	M	2760	µg/kg	1	87.00	<1	<1	1.90	<1	6.70	2.60	5.20	15.00	12.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	M	2760	µg/kg	1	130000.00	<1	<1	1.00	<1	5.70	2.60	3.00	5.50	4.80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	M	2760	µg/kg	1	47000.00	<1	<1	<1	<1	<1	<1	<1	1.80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m & p-Xylene	M	2760	µg/kg	1	56000.00	<1	<1	<1	<1	3.80	<1	2.20	6.00	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	M	2760	µg/kg	1	60000.00	<1	<1	<1	<1	1.30	<1	<1	1.20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl Tert-Butyl Ether	M	2760	µg/kg	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Appendix D: Chemical Laboratory Results

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20938-1		
Initial Date of Issue:	13-Jun-2022		
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	07-Jun-2022
Order No.:	PO115623	**Date Instructed:**	07-Jun-2022
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	13-Jun-2022
Date Approved:	13-Jun-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20938	22-20938	22-20938	22-20938
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1442555	1442556	1442557	1442558
		Client Sample ID.:			AN29-C	AN25-C	AP29-C	AO25-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.5	0.5	0.5
		Bottom Depth (m):				0.5	0.5	0.5
		Date Sampled:			06-Jun-2022	06-Jun-2022	06-Jun-2022	06-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	28	33	34	31
Soil Colour	N	2040		N/A	Grey	Black	Black	Black
Other Material	N	2040		N/A	None	None	None	None
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay
pH	M	2010		4.0	8.7	8.7	8.6	8.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	120	58	130	190
Iron (Total)	N	2430	mg/kg	100	30000	26000	26000	29000
Arsenic	M	2455	mg/kg	0.5	11	3.7	5.3	14
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.21	< 0.10	< 0.10
Chromium	M	2455	mg/kg	0.5	19	21	18	26
Manganese	M	2455	mg/kg	1.0	240	430	210	380
Copper	M	2455	mg/kg	0.50	5.8	8.8	7.6	8.1
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	18	19	16	21
Lead	M	2455	mg/kg	0.50	15	14	13	17
Selenium	M	2455	mg/kg	0.25	0.59	0.37	0.54	0.70
Vanadium	U	2455	mg/kg	0.5	28	20	22	33
Zinc	M	2455	mg/kg	0.50	47	52	45	55
Organic Matter	M	2625	%	0.40	2.4	2.2	4.3	2.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20938	22-20938	22-20938	22-20938
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1442555	1442556	1442557	1442558
		Client Sample ID.:			AN29-C	AN25-C	AP29-C	AO25-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	0.5	0.5	0.5
		Bottom Depth (m):				0.5	0.5	0.5
		Date Sampled:			06-Jun-2022	06-Jun-2022	06-Jun-2022	06-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	1.4	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.45	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	2.8	< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10	2.5	< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	1.5	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.75	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	1.1	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.67	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	1.1	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	17	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-21083-1
Initial Date of Issue:	14-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	8
Turnaround (Wkdays):	5
Date Approved:	14-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Jun-2022
Date Instructed:	08-Jun-2022
Results Due:	14-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1443178	1443179	1443180	1443181	1443182	1443183	1443184	1443185
Order No.: PO115623		Client Sample Ref.:			SPLJ-22	SPLJ-20	SPLJ-18	SPLJ-2	SPLJ-14	SPLJ-16	SPLJ-9	SPLJ-11
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	11	10	9.2	11	10	11	9.7	9.0
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Black	Brown	Brown	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Loam	Loam
pH	M	2010		4.0	9.4	9.3	9.7	9.4	10.0	9.0	9.1	9.2
Cyanide (Total)	M	2300	mg/kg	0.50	15	17	16	17	16	14	13	13
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.6	3.0	2.8	2.9	2.6	4.1	4.4	3.3
Iron (Total)	N	2430	mg/kg	100	13000	16000	15000	24000	18000	13000	15000	25000
Arsenic	M	2455	mg/kg	0.5	2.3	3.1	2.9	3.7	3.8	3.0	3.1	8.0
Cadmium	M	2455	mg/kg	0.10	0.26	0.30	0.40	0.27	0.37	0.31	0.43	0.43
Chromium	M	2455	mg/kg	0.5	23	34	47	37	55	32	30	40
Manganese	M	2455	mg/kg	1.0	1500	2000	1900	1800	2500	1800	1700	2200
Copper	M	2455	mg/kg	0.50	11	13	12	14	13	13	13	21
Mercury	M	2455	mg/kg	0.05	0.05	0.07	0.05	0.06	0.05	0.05	0.05	0.06
Nickel	M	2455	mg/kg	0.50	7.0	8.0	6.7	9.7	8.5	7.3	7.5	14
Lead	M	2455	mg/kg	0.50	50	44	34	38	35	38	55	54
Selenium	M	2455	mg/kg	0.25	0.37	0.47	0.44	0.43	0.51	0.42	0.39	1.0
Vanadium	U	2455	mg/kg	0.5	39	63	49	53	59	48	42	95
Zinc	M	2455	mg/kg	0.50	78	93	80	90	86	84	92	120
Organic Matter	M	2625	%	0.40	24	24	28	24	24	31	31	22
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	10	14	11	10	10	12	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	13	17	14	16	15	15	12	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	13	5.8	13	7.1	15	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	83	160	94	160	59	98	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	110	200	120	200	92	140	12	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	8.8	13	29	9.3	14	29	35	41
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	32	10	55	6.8	3.8	18	31	42
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	100	63	340	30	35	63	190	250

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083	22-21083
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1443178	1443179	1443180	1443181	1443182	1443183	1443184	1443185
Order No.: PO115623			Client Sample Ref.:		SPLJ-22	SPLJ-20	SPLJ-18	SPLJ-2	SPLJ-14	SPLJ-16	SPLJ-9	SPLJ-11
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
			Date Sampled:		07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	300	1200	880	210	140	230	200	340
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	440	1300	1300	260	200	340	460	680
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	540	1500	1400	460	290	480	470	680
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	12	13	15	13	23	33	39	18
Acenaphthylene	N	2800	mg/kg	0.10	3.3	3.0	4.0	3.4	6.3	9.7	9.3	0.80
Acenaphthene	M	2800	mg/kg	0.10	0.36	0.27	0.47	0.45	0.75	1.0	0.90	0.21
Fluorene	M	2800	mg/kg	0.10	2.6	2.0	2.8	2.6	4.9	7.8	6.5	0.74
Phenanthrene	M	2800	mg/kg	0.10	19	13	20	16	27	66	39	4.0
Anthracene	M	2800	mg/kg	0.10	4.9	3.6	6.1	4.6	8.4	21	15	1.1
Fluoranthene	M	2800	mg/kg	0.10	33	21	31	23	37	100	70	5.4
Pyrene	M	2800	mg/kg	0.10	23	15	22	16	27	73	52	3.8
Benzo[a]anthracene	M	2800	mg/kg	0.10	13	8.5	11	9.3	15	38	27	2.1
Chrysene	M	2800	mg/kg	0.10	14	8.2	9.1	9.3	14	37	27	2.3
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	17	10	14	12	17	45	35	3.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	6.1	4.4	5.4	4.4	6.5	17	12	0.87
Benzo[a]pyrene	M	2800	mg/kg	0.10	14	8.4	11	9.2	15	37	29	2.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	11	6.2	8.9	7.2	9.7	29	19	1.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.8	1.1	0.98	0.98	1.6	4.6	3.6	0.19
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	7.6	0.16	6.5	6.2	7.8	22	17	1.5
Total Of 16 PAH's	N	2800	mg/kg	2.0	180	120	170	140	220	540	400	48
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-21087-1
Initial Date of Issue:	14-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	14-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Jun-2022
Date Instructed:	08-Jun-2022
Results Due:	14-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1443194	1443195	1443196	1443197	1443198	1443199	1443200	1443201	1443202
		Sample Location:			SPLJ-4	SPLJ-6	SPLJ-8	SPLJ-10	SPLJ-12	SPLJ-3	SPLJ-5	SPLJ-7	SPLJ-25
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	8.9	6.5	10	9.3	8.9	10	6.0	11	7.5
Soil Colour	N	2040		N/A	Brown	Brown	Black	Black	Brown	Black	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Gravel	Loam	Loam
pH	M	2010		4.0	10.0	10.2	10.1	10.4	9.9	10.3	11.0	10.5	9.5
Cyanide (Total)	M	2300	mg/kg	0.50	12	14	14	12	12	11	8.8	8.2	0.85
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.3	2.0	1.8	1.9	2.6	1.9	2.3	2.3	2.5
Iron (Total)	N	2430	mg/kg	100	16000	15000	16000	25000	25000	24000	23000	21000	26000
Arsenic	M	2455	mg/kg	0.5	2.9	2.8	2.4	4.3	5.4	5.7	4.3	3.9	5.5
Cadmium	M	2455	mg/kg	0.10	0.33	0.31	0.31	0.29	0.47	0.38	0.33	0.26	0.27
Chromium	M	2455	mg/kg	0.5	54	58	55	73	58	53	62	60	46
Manganese	M	2455	mg/kg	1.0	2400	2500	2400	3100	3100	2900	2500	2600	2400
Copper	M	2455	mg/kg	0.50	14	12	11	14	19	15	15	12	16
Mercury	M	2455	mg/kg	0.05	0.09	0.05	0.06	0.06	0.07	0.07	0.05	< 0.05	0.07
Nickel	M	2455	mg/kg	0.50	7.2	5.9	5.3	9.8	13	11	11	8.6	14
Lead	M	2455	mg/kg	0.50	39	39	38	38	52	51	34	29	42
Selenium	M	2455	mg/kg	0.25	0.58	0.42	0.50	0.66	0.77	0.76	0.81	0.68	0.64
Vanadium	U	2455	mg/kg	0.5	65	61	60	72	82	77	65	58	67
Zinc	M	2455	mg/kg	0.50	88	79	150	90	130	110	85	75	120
Organic Matter	M	2625	%	0.40	36	40	34	36	34	33	29	28	24
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	6.2	< 1.0	11	< 1.0	< 1.0	< 1.0	2.5	9.6
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	20	23	15	18	12	15	11	21	15
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	33	26	17	30	13	19	12	30	23
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	70	35	24	75	< 1.0	23	< 1.0	61	51
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	200	120	160	200	2.9	68	8.8	170	160
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.7	< 1.0	< 1.0	41
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	320	210	210	340	27	130	32	290	300
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.1
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	61	13	28	59	15	17	7.7	62	28
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	83	8.2	33	73	3.3	23	< 1.0	91	82

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087	22-21087
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1443194	1443195	1443196	1443197	1443198	1443199	1443200	1443201	1443202
			Sample Location:		SPLJ-4	SPLJ-6	SPLJ-8	SPLJ-10	SPLJ-12	SPLJ-3	SPLJ-5	SPLJ-7	SPLJ-25
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
			Date Sampled:		07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	210	28	54	190	33	33	16	190	520
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	620	250	280	570	120	240	56	520	1400
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	6.1	7.1	9.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	980	300	400	890	170	310	79	870	2000
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	1300	510	610	1200	200	440	110	1200	2300
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	31	22	19	24	16	30	18	18	9.4
Acenaphthylene	N	2800	mg/kg	0.10	11	7.1	6.9	6.7	4.7	8.4	4.9	5.2	3.6
Acenaphthene	M	2800	mg/kg	0.10	1.6	0.73	1.1	0.70	0.51	0.81	0.56	0.58	0.46
Fluorene	M	2800	mg/kg	0.10	8.5	4.5	5.9	4.0	2.8	5.4	3.2	3.4	2.8
Phenanthrene	M	2800	mg/kg	0.10	57	26	45	20	17	29	17	19	19
Anthracene	M	2800	mg/kg	0.10	20	9.1	13	6.7	8.0	9.1	6.2	5.6	6.9
Fluoranthene	M	2800	mg/kg	0.10	87	43	66	31	34	44	27	28	39
Pyrene	M	2800	mg/kg	0.10	66	33	48	25	25	34	20	21	27
Benzo[a]anthracene	M	2800	mg/kg	0.10	34	16	23	12	12	17	9.9	10	15
Chrysene	M	2800	mg/kg	0.10	34	16	23	12	12	17	9.8	9.9	15
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	42	21	30	16	16	23	13	13	20
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	15	7.2	10	5.5	5.5	7.8	4.5	4.6	7.0
Benzo[a]pyrene	M	2800	mg/kg	0.10	34	16	24	12	12	18	10	10	15
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	23	10	17	8.5	8.3	12	6.7	7.2	10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	4.5	2.0	2.8	1.4	1.6	2.3	1.2	1.3	2.2
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	20	9.2	13	7.1	7.3	11	6.2	6.2	8.6
Total Of 16 PAH's	N	2800	mg/kg	2.0	490	240	350	190	180	270	160	160	200
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-21257-1
Initial Date of Issue:	14-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	15
Turnaround (Wkdays):	5
Date Approved:	14-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Jun-2022
Date Instructed:	08-Jun-2022
Results Due:	14-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1443981	1443982	1443983	1443984	1443985	1443986	1443987	1443988	1443989
Order No.: PO115623		Client Sample Ref.:											
		Sample Location:			SPLJ-1	SPLJ-13	SPLJ-15	SPLJ-17	SPLJ-19	SPLJ-21	SPLJ-23	SPLJ-24	SPLJ-26
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	10	8.1	9.3	8.4	7.1	8.8	6.7	8.7	4.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.5	9.5	9.6	10.1	9.5	9.5	9.7	10.1	10.0
Cyanide (Total)	M	2300	mg/kg	0.50	1.4	1.6	1.3	1.0	1.0	1.0	0.70	0.70	1.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.1	5.1	4.2	3.5	4.3	4.2	3.8	3.9	3.5
Iron (Total)	N	2430	mg/kg	100	29000	28000	29000	27000	29000	27000	28000	29000	30000
Arsenic	M	2455	mg/kg	0.5	6.3	6.5	5.6	5.4	5.8	5.2	5.8	6.5	5.7
Cadmium	M	2455	mg/kg	0.10	0.37	0.40	0.37	0.42	0.29	0.31	0.33	1.8	0.31
Chromium	M	2455	mg/kg	0.5	83	73	53	48	49	41	47	44	35
Manganese	M	2455	mg/kg	1.0	4800	3700	2900	2900	3300	2600	3200	3200	2600
Copper	M	2455	mg/kg	0.50	17	21	15	15	14	14	16	17	14
Mercury	M	2455	mg/kg	0.05	0.10	0.09	0.09	0.09	0.07	0.08	0.08	0.10	0.11
Nickel	M	2455	mg/kg	0.50	16	18	13	13	14	14	14	16	16
Lead	M	2455	mg/kg	0.50	51	53	46	53	53	43	47	53	45
Selenium	M	2455	mg/kg	0.25	1.0	0.99	0.80	0.83	0.71	0.70	0.81	0.90	0.83
Vanadium	U	2455	mg/kg	0.5	190	160	110	110	88	80	89	82	65
Zinc	M	2455	mg/kg	0.50	120	130	110	120	98	120	110	140	110
Organic Matter	M	2625	%	0.40	26	26	24	24	22	21	19	22	19
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	7.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	17	9.1	7.4	17	17	< 1.0	< 1.0	2.8	5.9
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	47	10	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	9.5	51	17	28	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	17	9.1	17	120	44	28	< 5.0	< 5.0	5.9
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	7.3	19	7.0	9.9	12	9.7	9.5	17	15
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	3.1	12	< 1.0	3.7	15	3.1	3.2	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257	22-21257
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1443981	1443982	1443983	1443984	1443985	1443986	1443987	1443988	1443989
Order No.: PO115623			Client Sample Ref.:										
			Sample Location:		SPLJ-1	SPLJ-13	SPLJ-15	SPLJ-17	SPLJ-19	SPLJ-21	SPLJ-23	SPLJ-24	SPLJ-26
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
			Date Sampled:		07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	22	49	24	39	69	32	41	25	30
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	79	130	63	130	190	96	94	60	83
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	110	210	94	180	290	140	150	100	130
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	130	220	110	300	330	170	150	110	130
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	11	12	11	10	12	8.5	10	13	7.0
Acenaphthylene	N	2800	mg/kg	0.10	2.0	2.9	2.8	2.3	3.1	3.1	2.7	2.4	2.1
Acenaphthene	M	2800	mg/kg	0.10	0.20	0.38	0.25	0.32	0.48	0.55	0.35	0.32	0.24
Fluorene	M	2800	mg/kg	0.10	1.4	2.2	1.9	1.7	2.3	2.0	0.80	1.8	1.5
Phenanthrene	M	2800	mg/kg	0.10	9.0	13	12	11	19	13	13	11	10
Anthracene	M	2800	mg/kg	0.10	2.9	4.0	3.8	3.3	5.5	4.1	3.8	3.1	2.5
Fluoranthene	M	2800	mg/kg	0.10	16	19	19	17	34	26	21	16	19
Pyrene	M	2800	mg/kg	0.10	11	14	14	12	23	20	14	11	14
Benzo[a]anthracene	M	2800	mg/kg	0.10	6.9	8.2	8.7	7.4	14	13	8.4	7.0	8.1
Chrysene	M	2800	mg/kg	0.10	6.7	7.8	8.6	7.4	14	13	8.5	6.7	8.3
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	8.9	11	11	9.8	18	18	11	9.0	12
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.7	3.4	3.6	3.1	5.6	5.9	3.4	3.1	3.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	7.2	8.3	9.1	7.8	13	14	8.6	7.1	8.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	5.0	6.1	6.5	5.7	9.8	10	6.4	5.0	7.0
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.3	1.1	1.4	1.0	2.0	2.3	1.2	0.84	1.2
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	4.2	5.2	5.6	5.5	8.5	9.0	5.9	4.6	6.4
Total Of 16 PAH's	N	2800	mg/kg	2.0	96	120	120	110	180	160	120	100	110
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	0.061	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-21257	22-21257	22-21257	22-21257	22-21257	22-21257
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1443990	1443991	1443992	1443993	1443994	1443995
Order No.: PO115623		Client Sample Ref.:								ES
		Sample Location:			SPLJ-27	SPLJ-28	SPLJ-29	SPLJ-30	SPLJ-31	SPLJ-32
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
		Asbestos Lab:				DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A		-		-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	13	3.9	4.1	3.6	3.6	2.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.4	10.2	10.4	9.2	9.3
Cyanide (Total)	M	2300	mg/kg	0.50	1.3	0.90	1.2	2.7	< 0.50	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	3.0	3.3	3.2	2.5	2.9	4.9
Iron (Total)	N	2430	mg/kg	100	29000	30000	30000	28000	22000	21000
Arsenic	M	2455	mg/kg	0.5	5.8	6.2	5.4	5.4	11	7.5
Cadmium	M	2455	mg/kg	0.10	0.32	0.33	0.31	0.51	0.42	0.33
Chromium	M	2455	mg/kg	0.5	43	47	37	42	16	22
Manganese	M	2455	mg/kg	1.0	3400	3400	2600	2200	680	840
Copper	M	2455	mg/kg	0.50	16	17	14	19	16	21
Mercury	M	2455	mg/kg	0.05	0.23	0.16	0.16	0.40	0.08	0.10
Nickel	M	2455	mg/kg	0.50	15	16	15	19	29	15
Lead	M	2455	mg/kg	0.50	54	54	60	66	23	54
Selenium	M	2455	mg/kg	0.25	0.86	0.90	0.61	0.95	0.63	0.77
Vanadium	U	2455	mg/kg	0.5	90	89	74	52	16	29
Zinc	M	2455	mg/kg	0.50	110	130	120	220	130	96
Organic Matter	M	2625	%	0.40	17	17	17	24	0.98	5.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.6
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	13	14	13	6.8	14
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	8.4	19	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	63	< 1.0	< 1.0	< 1.0	28	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	75	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	63	13	89	22	54	16
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	5.1	8.4	9.4	11	6.1	13
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	2.7	39	6.4	< 1.0	12

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21257	22-21257	22-21257	22-21257	22-21257	22-21257
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1443990	1443991	1443992	1443993	1443994	1443995
Order No.: PO115623			Client Sample Ref.:							ES
			Sample Location:		SPLJ-27	SPLJ-28	SPLJ-29	SPLJ-30	SPLJ-31	SPLJ-32
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2	0.2	0.2
			Date Sampled:		07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
			Asbestos Lab:			DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	19	18	320	44	21	80
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	94	17	800	90	150	190
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	41	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	120	46	1200	150	170	290
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	180	59	1300	170	230	310
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	7.6	4.9	4.5	6.2	< 0.10	2.7
Acenaphthylene	N	2800	mg/kg	0.10	2.2	1.3	1.2	2.5	< 0.10	2.7
Acenaphthene	M	2800	mg/kg	0.10	0.25	0.21	0.38	0.50	< 0.10	0.64
Fluorene	M	2800	mg/kg	0.10	1.1	0.94	0.96	3.9	< 0.10	3.6
Phenanthrene	M	2800	mg/kg	0.10	12	5.5	4.9	22	< 0.10	22
Anthracene	M	2800	mg/kg	0.10	3.5	1.3	1.2	6.2	< 0.10	6.2
Fluoranthene	M	2800	mg/kg	0.10	20	9.9	7.6	33	< 0.10	31
Pyrene	M	2800	mg/kg	0.10	15	7.1	5.6	22	< 0.10	20
Benzo[a]anthracene	M	2800	mg/kg	0.10	8.8	4.5	3.4	16	< 0.10	12
Chrysene	M	2800	mg/kg	0.10	8.7	4.2	3.2	16	< 0.10	11
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	13	6.0	5.6	23	< 0.10	13
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	3.8	1.9	1.7	7.8	< 0.10	4.6
Benzo[a]pyrene	M	2800	mg/kg	0.10	9.7	4.7	4.4	19	< 0.10	9.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	7.2	3.5	3.3	13	< 0.10	6.7
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.8	0.87	0.78	3.3	< 0.10	1.5
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	7.1	3.3	3.1	11	< 0.10	5.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	120	60	52	210	< 2.0	150
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
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B - Sample age exceeds stability time (sampling to extraction)
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D - Broken Container
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All soil samples will be retained for a period of 30 days from the date of receipt
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Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-21373-1
Initial Date of Issue:	15-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	15-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	09-Jun-2022
Date Instructed:	09-Jun-2022
Results Due:	15-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1444540	1444541	1444542	1444543	1444544	1444545	1444546	1444547	1444548
		Client Sample ID.:			AU33-1	AT33-1	AT33-2	AS33-1	AS33-2	AR33-1	AR33-2	AQ33-1	AQ33-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.90	1.20	2.00	1.20	2.00	0.90	1.60	0.60	1.70
		Date Sampled:			07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	6.5	7.4	11	13	13	5.9	31	14	16
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	White	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Chalk	Sand	Sand
pH	M	2010		4.0	11.0	10.5	10.8	12.0	9.7	9.7	12.0	11.1	11.5
Cyanide (Total)	M	2300	mg/kg	0.50	4.5	2.6	3.5	1.8	1.5	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.2	4.7	0.86	71	1.3	0.93	1.7	1.3	13
Iron (Total)	N	2430	mg/kg	100	25000	18000	19000	19000	21000	27000	2100	23000	17000
Arsenic	M	2455	mg/kg	0.5	72	4.0	14	5.5	22	2.6	1.8	8.4	5.2
Cadmium	M	2455	mg/kg	0.10	0.68	0.42	0.22	0.14	0.45	0.15	< 0.10	0.20	0.13
Chromium	M	2455	mg/kg	0.5	66	11	11	22	12	220	19	28	30
Manganese	M	2455	mg/kg	1.0	17000	2000	1300	2600	510	1600	240	2300	1200
Copper	M	2455	mg/kg	0.50	30	7.0	27	8.9	38	6.7	2.7	17	11
Mercury	M	2455	mg/kg	0.05	0.34	< 0.05	0.06	< 0.05	0.81	< 0.05	< 0.05	0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	32	7.0	16	6.8	23	31	3.6	16	9.9
Lead	M	2455	mg/kg	0.50	25	26	50	20	41	16	7.1	25	16
Selenium	M	2455	mg/kg	0.25	2.1	2.2	2.3	2.3	5.4	0.31	0.29	0.95	1.1
Vanadium	U	2455	mg/kg	0.5	79	29	26	48	22	54	7.9	39	29
Zinc	M	2455	mg/kg	0.50	85	41	41	42	76	29	9.4	51	48
Organic Matter	M	2625	%	0.40	13	4.8	15	5.0	24	0.72	3.8	24	6.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	45	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	730	< 1.0	110	110
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	910	< 5.0	110	110
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1444540	1444541	1444542	1444543	1444544	1444545	1444546	1444547	1444548
			Client Sample ID.:		AU33-1	AT33-1	AT33-2	AS33-1	AS33-2	AR33-1	AR33-2	AQ33-1	AQ33-2
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.90	1.20	2.00	1.20	2.00	0.90	1.60	0.60	1.70
			Date Sampled:		07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20	< 1.0	85	87
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	20	< 5.0	85	87
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	930	< 10	190	200
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.34	< 0.10	0.24	0.26	< 0.10	0.19	< 0.10	0.25	0.26
Pyrene	M	2800	mg/kg	0.10	0.40	< 0.10	0.21	0.24	< 0.10	0.17	< 0.10	0.17	0.24
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-23680-1
Initial Date of Issue:	30-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	5
Turnaround (Wkdays):	5
Date Approved:	30-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	24-Jun-2022
Date Instructed:	24-Jun-2022
Results Due:	30-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-23680	22-23680	22-23680	22-23680	22-23680
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1454848	1454849	1454850	1454851	1454852
		Client Sample ID.:			R159-1	R164-1	R164-2	R154-1	R157-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20
		Date Sampled:			22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	6.3	7.2	7.4	2.9	5.7
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Loam	Loam	Gravel	Loam
pH	M	2010		4.0	7.8	7.7	7.5	7.6	9.7
Cyanide (Total)	M	2300	mg/kg	0.50	0.80	15	12	1.0	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	3.2	2.6	3.7	1.7
Iron (Total)	N	2430	mg/kg	100	31000	26000	26000	18000	28000
Arsenic	M	2455	mg/kg	0.5	11	5.7	16	7.4	8.9
Cadmium	M	2455	mg/kg	0.10	0.41	0.83	1.1	0.22	0.76
Chromium	M	2455	mg/kg	0.5	19	49	85	22	98
Manganese	M	2455	mg/kg	1.0	6100	3000	4900	1300	6500
Copper	M	2455	mg/kg	0.50	150	22	39	15	18
Mercury	M	2455	mg/kg	0.05	1.7	0.31	0.35	0.05	0.15
Nickel	M	2455	mg/kg	0.50	11	22	27	19	19
Lead	M	2455	mg/kg	0.50	67	130	160	31	58
Selenium	M	2455	mg/kg	0.25	1.7	0.97	1.5	1.3	0.98
Vanadium	U	2455	mg/kg	0.5	34	58	91	33	170
Zinc	M	2455	mg/kg	0.50	180	330	350	68	150
Organic Matter	M	2625	%	0.40	4.0	9.0	9.1	3.6	19
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	20	25	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	360	170	240	80	150
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	35	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	360	190	300	80	150
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.6

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-23680	22-23680	22-23680	22-23680	22-23680
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1454848	1454849	1454850	1454851	1454852
		Client Sample ID.:			R159-1	R164-1	R164-2	R154-1	R157-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20
		Date Sampled:			22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	14	24	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	71	170	< 1.0	33
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	280	1600	2500	160	270
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	410	580	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	280	2100	3300	160	310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	640	2300	3600	240	460
Benzene	M	2760	µg/kg	1.0	5.3	< 1.0	< 1.0	< 1.0	3.1
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.1
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.0
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.91
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.75
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	1.5	1.4	0.27	4.6
Anthracene	M	2800	mg/kg	0.10	< 0.10	3.3	3.1	0.34	1.3
Fluoranthene	M	2800	mg/kg	0.10	0.39	20	18	1.1	8.0
Pyrene	M	2800	mg/kg	0.10	0.34	21	18	1.0	5.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	17	15	0.80	4.0
Chrysene	M	2800	mg/kg	0.10	< 0.10	18	16	0.81	3.0
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	40	36	1.6	5.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	12	11	0.49	1.6
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	33	29	1.3	3.9
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	35	30	1.3	2.9
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	4.9	4.2	0.21	0.41
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	30	26	0.99	2.5
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	240	210	10	48
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

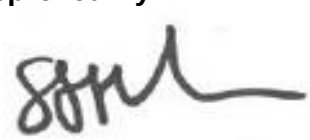
Eurofins Chemtest Ltd
Depot Road
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Email: info@chemtest.com

Final Report

Report No.:	22-23919-1
Initial Date of Issue:	01-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669

Quotation No.:	Q21-24056	**Date Received:**	27-Jun-2022
Order No.:	PO115623	**Date Instructed:**	27-Jun-2022
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	01-Jul-2022
Date Approved:	01-Jul-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-23919	22-23919	22-23919	22-23919
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1455828	1455829	1455830	1455831
Order No.: PO115623		Client Sample Ref.:			3CP2-1	R164-3	R164-4	3CP2-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20
		Date Sampled:			22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	9.4	4.8	6.2	13
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	6.1	6.5	6.5	7.7
Cyanide (Total)	M	2300	mg/kg	0.50	0.70	2.4	1.8	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.2	2.9	2.6	6.9
Iron (Total)	N	2430	mg/kg	100	28000	25000	24000	26000
Arsenic	M	2455	mg/kg	0.5	12	7.0	12	10
Cadmium	M	2455	mg/kg	0.10	0.36	0.71	0.52	0.56
Chromium	M	2455	mg/kg	0.5	89	240	420	39
Manganese	M	2455	mg/kg	1.0	6500	8500	14000	2400
Copper	M	2455	mg/kg	0.50	32	17	21	18
Mercury	M	2455	mg/kg	0.05	0.17	0.11	0.12	0.23
Nickel	M	2455	mg/kg	0.50	18	15	15	18
Lead	M	2455	mg/kg	0.50	59	60	69	59
Selenium	M	2455	mg/kg	0.25	1.3	1.5	2.7	1.6
Vanadium	U	2455	mg/kg	0.5	330	170	290	74
Zinc	M	2455	mg/kg	0.50	130	250	230	250
Organic Matter	M	2625	%	0.40	6.8	6.5	6.4	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	33	< 1.0	< 1.0	32
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	12	< 1.0	< 1.0	14
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	4.2	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	45	< 5.0	< 5.0	46
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-23919	22-23919	22-23919	22-23919
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1455828	1455829	1455830	1455831
Order No.: PO115623		Client Sample Ref.:			3CP2-1	R164-3	R164-4	3CP2-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20
		Date Sampled:			22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	3.2	< 1.0	9.4	3.3
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	48	< 1.0	79	24
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	51	< 5.0	89	27
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	96	< 10	93	73
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.89	< 0.10	< 0.10	0.75
Acenaphthylene	N	2800	mg/kg	0.10	0.17	< 0.10	< 0.10	0.11
Acenaphthene	M	2800	mg/kg	0.10	0.14	< 0.10	< 0.10	0.11
Fluorene	M	2800	mg/kg	0.10	0.24	< 0.10	< 0.10	0.24
Phenanthrene	M	2800	mg/kg	0.10	2.4	0.51	2.8	1.4
Anthracene	M	2800	mg/kg	0.10	0.48	0.30	1.2	0.30
Fluoranthene	M	2800	mg/kg	0.10	2.9	1.6	9.1	1.5
Pyrene	M	2800	mg/kg	0.10	1.9	1.4	6.6	1.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.5	1.1	4.2	0.73
Chrysene	M	2800	mg/kg	0.10	1.6	1.2	5.0	0.56
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.0	2.2	7.3	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.74	0.67	2.2	0.30
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.3	1.5	5.2	0.67
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.80	1.2	4.5	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.17	0.24	0.75	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.95	1.3	4.3	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	18	13	53	8.8
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
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I/S	Insufficient Sample
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N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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The results relate only to the items tested
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None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-24434-1
Initial Date of Issue:	05-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	6
Turnaround (Wkdays):	5
Date Approved:	05-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	29-Jun-2022
Date Instructed:	29-Jun-2022
Results Due:	05-Jul-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-24434	22-24434	22-24434	22-24434	22-24434	22-24434
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1458085	1458086	1458087	1458088	1458089	1458090
		Client Sample ID.:			R164-5	R164-6	R164-7	R164-8	R164-9	R164-10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	0.58	2.4	0.51	7.7	1.1	0.15
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	11.1	10.4	9.6	10.3	11.8	11.7
Cyanide (Total)	M	2300	mg/kg	0.50	2.0	13	< 0.50	0.50	< 0.50	0.70
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	4.3	4.1	3.7	16	5.1	3.1
Iron (Total)	N	2430	mg/kg	100	20000	14000	19000	16000	22000	24000
Arsenic	M	2455	mg/kg	0.5	7.0	6.7	8.3	8.4	5.1	5.3
Cadmium	M	2455	mg/kg	0.10	0.55	1.0	0.25	0.78	0.47	0.70
Chromium	M	2455	mg/kg	0.5	210	54	85	94	400	200
Manganese	M	2455	mg/kg	1.0	8300	2900	3800	4500	20000	9500
Copper	M	2455	mg/kg	0.50	19	16	13	18	27	22
Mercury	M	2455	mg/kg	0.05	0.09	0.20	0.05	0.10	0.33	0.20
Nickel	M	2455	mg/kg	0.50	17	22	19	17	11	13
Lead	M	2455	mg/kg	0.50	72	100	35	81	69	93
Selenium	M	2455	mg/kg	0.25	2.2	0.89	1.9	1.6	0.80	1.6
Vanadium	U	2455	mg/kg	0.5	170	63	75	96	340	240
Zinc	M	2455	mg/kg	0.50	300	280	130	310	140	200
Organic Matter	M	2625	%	0.40	11	9.0	10	11	2.4	7.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	59	< 1.0	< 1.0	57	77
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	210	210	280	290	160
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	210	42	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	470	250	280	350	240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	41	9.6	< 1.0	< 1.0	6.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	100	110	< 1.0	< 1.0	33
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	2500	760	50	120	500

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24434	22-24434	22-24434	22-24434	22-24434	22-24434
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458085	1458086	1458087	1458088	1458089	1458090
			Client Sample ID.:		R164-5	R164-6	R164-7	R164-8	R164-9	R164-10
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Date Sampled:		27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	120	64	< 1.0	< 1.0	45
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	2700	940	50	120	580
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	3200	1200	330	470	820
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	1.5	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	9.0	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.32	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.24	1.9	< 0.10	2.3	< 0.10	1.3
Anthracene	M	2800	mg/kg	0.10	0.19	6.3	< 0.10	2.4	< 0.10	0.97
Fluoranthene	M	2800	mg/kg	0.10	1.0	27	0.46	9.5	0.75	6.9
Pyrene	M	2800	mg/kg	0.10	1.2	36	0.39	7.4	0.73	7.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.70	22	< 0.10	3.7	0.29	4.5
Chrysene	M	2800	mg/kg	0.10	0.73	37	< 0.10	5.7	0.38	7.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.7	65	< 0.10	6.5	< 0.10	12
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.57	22	< 0.10	2.1	< 0.10	4.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.2	55	< 0.10	5.5	< 0.10	9.9
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.2	50	< 0.10	< 0.10	< 0.10	10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.19	8.3	< 0.10	< 0.10	< 0.10	1.2
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.2	49	< 0.10	< 0.10	< 0.10	9.8
Total Of 16 PAH's	N	2800	mg/kg	2.0	10	390	< 2.0	45	2.2	75
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
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All water samples will be retained for 14 days from the date of receipt
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If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-24643-1
Initial Date of Issue:	07-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	2
Turnaround (Wkdays):	5
Date Approved:	07-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	30-Jun-2022
Date Instructed:	30-Jun-2022
Results Due:	06-Jul-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458824
			Client Sample ID.:		AQ30-C
			Sample Type:		SOIL
			Date Sampled:		29-Jun-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	25
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	None
Soil Texture	N	2040		N/A	Clay
pH	M	2010		4.0	9.1
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	86
Iron (Total)	N	2430	mg/kg	100	21000
Arsenic	M	2455	mg/kg	0.5	9.2
Cadmium	M	2455	mg/kg	0.10	< 0.10
Chromium	M	2455	mg/kg	0.5	22
Manganese	M	2455	mg/kg	1.0	200
Copper	M	2455	mg/kg	0.50	8.3
Mercury	M	2455	mg/kg	0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	18
Lead	M	2455	mg/kg	0.50	16
Selenium	M	2455	mg/kg	0.25	0.65
Vanadium	U	2455	mg/kg	0.5	27
Zinc	M	2455	mg/kg	0.50	59
Organic Matter	M	2625	%	0.40	2.4
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458824
			Client Sample ID.:		AQ30-C
			Sample Type:		SOIL
			Date Sampled:		29-Jun-2022
			Asbestos Lab:		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	7.1
Electrical Conductivity	U	1020	µS/cm	1.0	760
Suspended Solids At 105C	U	1030	mg/l	5.0	63
Total Dissolved Solids	N	1020	mg/l	1.0	490
Turbidity	N	1060	NTU	1.0	26
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	21
Dissolved Oxygen	N	1150	mg O2/l	0.50	6.9
Redox Potential	N	1170	mV	N/A	170
Chloride	U	1220	mg/l	1.0	52
Fluoride	U	1220	mg/l	0.050	0.58
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.20
Phosphorus (Total)	N	1220	mg/l	0.020	0.020
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	< 0.020
Sulphur	N	1220	mg/l	1.0	24
Sulphate	U	1220	mg/l	1.0	71
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	35
Magnesium	U	1455	mg/l	0.20	6.9
Total Calcium	N	1455	mg/l	5.0	35
Total Magnesium	N	1455	mg/l	0.50	6.8
Total Hardness as CaCO3	U	1270	mg/l	15	120
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.8
Boron (Dissolved)	U	1455	µg/l	10.0	130
Barium (Dissolved)	U	1455	µg/l	5.00	38
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	< 0.50
Copper (Dissolved)	U	1455	µg/l	0.50	0.57
Iron (Dissolved)	N	1455	µg/l	5.0	< 5.0
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	6.4
Nickel (Dissolved)	U	1455	µg/l	0.50	< 0.50
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.57

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	0.63
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.9
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5
Arsenic (Total)	N	1455	µg/l	0.20	7.1
Boron (Total)	N	1455	µg/l	10.0	160
Barium (Total)	N	1455	µg/l	5.00	45
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	2.7
Copper (Total)	N	1455	µg/l	0.50	2.8
Iron (Total)	N	1455	µg/l	5.0	250
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	28
Nickel (Total)	N	1455	µg/l	0.50	2.0
Lead (Total)	N	1455	µg/l	0.50	2.0
Antimony (Total)	N	1455	µg/l	0.50	0.63
Selenium (Total)	N	1455	µg/l	0.50	0.83
Vanadium (Total)	N	1455	µg/l	0.50	8.1
Zinc (Total)	N	1455	µg/l	2.5	7.7
Chromium (Hexavalent)	U	1490	µg/l	20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	10
Total Inorganic Carbon	N	1220	mg/l	2.5	24
Total Organic Carbon	U	1610	mg/l	2.0	7.6
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	49
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	49
Total Petroleum Hydrocarbons	N	1675	µg/l	10	49
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24643
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1458825
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		29-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-24801-1
Initial Date of Issue:	07-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	11
Turnaround (Wkdays):	5
Date Approved:	07-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	01-Jul-2022
Date Instructed:	01-Jul-2022
Results Due:	07-Jul-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1459497	1459498	1459499	1459500	1459501	1459502	1459503	1459504	1459505
		Client Sample ID.:			AX32-1	AX32-2	AX32-3	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.3	1.3	2.3	0.5	1.5	0.3	1.3	0.3	1.0
		Date Sampled:			29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	3.2	12	11	5.8	5.1	9.4	2.6	1.4	10
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Clay
pH	M	2010		4.0	9.2	11.8	8.8	11.0	9.5	11.1	10.3	8.9	10.0
Cyanide (Total)	M	2300	mg/kg	0.50	0.50	< 0.50	< 0.50	0.50	0.90	0.90	1.1	1.6	1.7
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	59	< 0.50	< 0.50	1.5	0.93	3.9	0.68	0.86	1.6
Iron (Total)	N	2430	mg/kg	100	22000	18000	17000	29000	28000	30000	11000	32000	28000
Arsenic	M	2455	mg/kg	0.5	110	3.6	13	8.9	1.8	6.3	1.5	7.3	6.4
Cadmium	M	2455	mg/kg	0.10	0.94	0.11	0.31	0.19	0.20	0.27	0.23	0.39	0.24
Chromium	M	2455	mg/kg	0.5	80	11	23	120	230	48	10	700	63
Manganese	M	2455	mg/kg	1.0	54000	2200	8600	120000	12000	3300	790	48000	4600
Copper	M	2455	mg/kg	0.50	55	8.4	39	22	12	14	2.8	23	15
Mercury	M	2455	mg/kg	0.05	0.18	< 0.05	0.06	0.07	0.13	0.07	< 0.05	0.19	0.08
Nickel	M	2455	mg/kg	0.50	56	7.4	8.7	36	4.5	21	5.3	16	16
Lead	M	2455	mg/kg	0.50	64	21	24	25	34	34	9.4	41	28
Selenium	M	2455	mg/kg	0.25	1.7	1.7	2.0	0.64	1.9	0.90	0.33	0.50	0.53
Vanadium	U	2455	mg/kg	0.5	100	26	47	98	220	49	11	660	67
Zinc	M	2455	mg/kg	0.50	320	45	49	99	60	90	20	70	66
Organic Matter	M	2625	%	0.40	3.8	21	11	64	11	11	5.7	1.9	2.6
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	330	84	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	1300	400	< 1.0	12	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	97	4900	1600	18	20	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	99	5200	1600	8.9	17	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	480	6800	2000	58	250	< 1.0	150	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	670	19000	5700	85	300	< 5.0	150	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	240	30	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	710	150	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	3200	840	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1459497	1459498	1459499	1459500	1459501	1459502	1459503	1459504	1459505
					Client Sample ID.:	AX32-1	AX32-2	AX32-3	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.3	1.3	2.3	0.5	1.5	0.3	1.3	0.3	1.0
					Date Sampled:	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022
					Asbestos Lab:	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	3100	780	5.6	< 1.0	5.7	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		27	2600	680	200	90	71	33	36	41
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	55	< 1.0	5.6	6.7	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		27	9800	2500	210	97	77	33	36	41
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		700	29000	8100	290	400	77	190	36	41
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	18	5.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	27	10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	5.0	< 0.10	2.9	0.35	0.76	< 0.10	< 0.10	0.28
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	7.8	< 0.10	1.4	0.11	0.26	< 0.10	< 0.10	0.24
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	25	< 0.10	0.31	0.15	0.13	< 0.10	< 0.10	0.12
Fluorene	M	2800	mg/kg	0.10		< 0.10	13	< 0.10	0.89	0.12	0.18	< 0.10	< 0.10	0.19
Phenanthrene	M	2800	mg/kg	0.10		1.1	110	30	8.1	1.1	1.1	< 0.10	0.84	0.92
Anthracene	M	2800	mg/kg	0.10		0.20	21	4.2	2.5	0.23	0.26	< 0.10	0.21	0.32
Fluoranthene	M	2800	mg/kg	0.10		0.72	68	20	20	1.6	2.0	< 0.10	0.95	1.5
Pyrene	M	2800	mg/kg	0.10		0.69	51	14	14	1.3	1.6	< 0.10	0.88	1.6
Benzo[a]anthracene	M	2800	mg/kg	0.10		< 0.10	20	5.1	9.3	0.90	1.1	< 0.10	0.56	1.0
Chrysene	M	2800	mg/kg	0.10		< 0.10	18	4.8	9.2	0.86	1.0	< 0.10	0.65	0.92
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		< 0.10	17	4.6	12	1.4	1.8	< 0.10	< 0.10	1.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		< 0.10	6.1	1.8	4.1	0.39	0.66	< 0.10	< 0.10	0.50
Benzo[a]pyrene	M	2800	mg/kg	0.10		< 0.10	13	3.3	8.2	0.91	1.2	< 0.10	< 0.10	0.94
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	6.5	1.7	7.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	1.5	0.34	1.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	6.0	1.8	6.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		2.7	390	92	110	9.4	12	< 2.0	4.1	10
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	0.75	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	0.75	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-24801	22-24801
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1459506	1459507
		Client Sample ID.:			AX31-1	AX31-2
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.5	1.8
		Date Sampled:			29-Jun-2022	29-Jun-2022
		Asbestos Lab:				DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected
Moisture	N	2030	%	0.020	5.1	8.8
Soil Colour	N	2040		N/A	Brown	Black
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	11.4	10.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	1.3
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	1.2
Iron (Total)	N	2430	mg/kg	100	28000	30000
Arsenic	M	2455	mg/kg	0.5	5.3	7.9
Cadmium	M	2455	mg/kg	0.10	0.50	0.66
Chromium	M	2455	mg/kg	0.5	18	83
Manganese	M	2455	mg/kg	1.0	2900	4000
Copper	M	2455	mg/kg	0.50	11	21
Mercury	M	2455	mg/kg	0.05	0.05	0.05
Nickel	M	2455	mg/kg	0.50	9.0	10
Lead	M	2455	mg/kg	0.50	62	110
Selenium	M	2455	mg/kg	0.25	0.98	1.9
Vanadium	U	2455	mg/kg	0.5	29	190
Zinc	M	2455	mg/kg	0.50	190	230
Organic Matter	M	2625	%	0.40	28	14
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	9.9	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	68	6.9
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	430	78
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	640	99
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	3400	270
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	4600	450
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	110	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-24801	22-24801
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1459506	1459507
			Client Sample ID.:		AX31-1	AX31-2
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.5	1.8
			Date Sampled:		29-Jun-2022	29-Jun-2022
			Asbestos Lab:			DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	75	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	4400	76
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	2000	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	6500	76
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	11000	530
Benzene	M	2760	µg/kg	1.0	1.6	1.9
Toluene	M	2760	µg/kg	1.0	1.2	1.8
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.55
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.17
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.44
Phenanthrene	M	2800	mg/kg	0.10	2.0	1.4
Anthracene	M	2800	mg/kg	0.10	0.28	0.30
Fluoranthene	M	2800	mg/kg	0.10	2.1	1.7
Pyrene	M	2800	mg/kg	0.10	1.7	1.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.72	0.54
Chrysene	M	2800	mg/kg	0.10	0.89	0.35
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.2	0.65
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.37	0.25
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.68	0.41
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	9.9	7.9
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
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D - Broken Container
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Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-26760-2		
Initial Date of Issue:	22-Jul-2022	**Date of Re-Issue:**	25-Jul-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:		**Date Received:**	15-Jul-2022
Order No.:	PO115623	**Date Instructed:**	15-Jul-2022
No. of Samples:	8		
Turnaround (Wkdays):	10	**Results Due:**	28-Jul-2022
Date Approved:	25-Jul-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760
Quotation No.:		**Chemtest Sample ID.:**			1468353	1468354	1468355	1468356	1468357	1468358	1468359	1468360
		Client Sample ID.:			3CP2-3	AV31-1	AV32-1	AW32-1	AO33-1	AO32-1	AO32-2	AO28-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.70	1.00	1.00	1.70	2.00	2.90	
		Bottom Depth (m):			0.20	0.70	1.00	1.00	1.70	2.00	2.90	
		Date Sampled:			13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM			DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-	-	-			Fibres/Clumps		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected			Amosite		No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001						0.005		
Total Asbestos	U	2192	%	0.001						0.005		
Moisture	N	2030	%	0.020	9.2	2.9	4.1	0.82	1.3	26	8.7	26
Soil Colour	N	2040		N/A	Brown	Black	Brown	Brown	Grey	Grey	Brown	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Roots and Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Gravel	Sand	Gravel	Clay
pH	M	2010		4.0	10.1	9.6	10.1	9.0	10.3	8.9	10.0	8.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.1	< 0.50	< 0.50	1.7	3.4	11	5.1	180
Iron (Total)	N	2430	mg/kg	100	57000	110000	83000	91000	31000	35000	85000	28000
Arsenic	M	2455	mg/kg	0.5	6.2	8.2	17	280	9.1	19	9.6	13
Cadmium	M	2455	mg/kg	0.10	0.25	0.14	0.56	1.5	0.20	0.16	0.77	< 0.10
Chromium	M	2455	mg/kg	0.5	200	28	43	57	31	24	67	29
Manganese	M	2455	mg/kg	1.0	11000	2200	15000	76000	3300	2800	4200	380
Copper	M	2455	mg/kg	0.50	17	13	26	200	24	23	21	9.6
Mercury	M	2455	mg/kg	0.05	0.14	< 0.05	0.05	0.24	0.05	0.13	0.16	< 0.05
Nickel	M	2455	mg/kg	0.50	14	11	24	270	13	20	19	28
Lead	M	2455	mg/kg	0.50	44	44	55	100	24	35	150	20
Selenium	M	2455	mg/kg	0.25	1.8	1.2	0.96	1.0	0.85	1.3	1.3	0.85
Vanadium	U	2455	mg/kg	0.5	410	40	80	160	55	46	98	36
Zinc	M	2455	mg/kg	0.50	110	74	130	270	55	72	330	72
Organic Matter	M	2625	%	0.40	5.3	67	47	41	9.1	34	24	4.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	8.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	28	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760
Quotation No.:		**Chemtest Sample ID.:**			1468353	1468354	1468355	1468356	1468357	1468358	1468359	1468360
		Client Sample ID.:			3CP2-3	AV31-1	AV32-1	AW32-1	AO33-1	AO32-1	AO32-2	AO28-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.70	1.00	1.00	1.70	2.00	2.90	
		Bottom Depth (m):			0.20	0.70	1.00	1.00	1.70	2.00	2.90	
		Date Sampled:			13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM			DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	28	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	4.4	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.87	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.50	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	2.1	0.86	1.4	3.2	0.75	0.55	1.5	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.48	0.16	0.26	0.88	0.19	0.19	0.39	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	2.4	0.64	0.92	5.4	1.0	0.46	1.8	< 0.10
Pyrene	M	2800	mg/kg	0.10	1.7	0.56	0.75	3.7	0.75	0.40	1.5	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.1	0.42	0.60	2.9	0.54	< 0.10	0.69	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.93	0.32	0.65	2.7	0.43	< 0.10	0.94	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6	0.50	0.77	4.2	0.80	< 0.10	1.1	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.50	0.16	0.21	1.4	0.30	< 0.10	0.52	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.1	0.38	0.49	2.9	0.49	< 0.10	0.67	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.45	2.4	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.17	0.49	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.45	2.1	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	12	4.0	7.1	38	5.3	< 2.0	9.1	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	0.092	< 0.020	0.88	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760
Quotation No.:					**Chemtest Sample ID.:**	1468353	1468354	1468355	1468356	1468357	1468358	1468359	1468360
					Client Sample ID.:	3CP2-3	AV31-1	AV32-1	AW32-1	AO33-1	AO32-1	AO32-2	AO28-C
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.70	1.00	1.00	1.70	2.00	2.90	
					Bottom Depth (m):	0.20	0.70	1.00	1.00	1.70	2.00	2.90	
					Date Sampled:	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022
					Asbestos Lab:	DURHAM	DURHAM	DURHAM			DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	0.88	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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U/S	Unsuitable Sample
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<	"less than"
>	"greater than"
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LOD	Limit of detection

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All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
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Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

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A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

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All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-29945-1
Initial Date of Issue:	16-Aug-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson Caitlin Davies David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	PO115623
No. of Samples:	5
Turnaround (Wkdays):	5
Date Approved:	15-Aug-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Aug-2022
Date Instructed:	08-Aug-2022
Results Due:	12-Aug-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-29945	22-29945	22-29945	22-29945	22-29945
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1482829	1482830	1482831	1482832	1482833
		Client Sample ID.:			AR32-1	AS32-1	AT32-1	AU29-1	AV30-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	1.3	1.3	0.6	1.0
		Date Sampled:			04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	7.6	15	11	6.9	9.2
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Clay	Clay	Loam	Gravel
pH	M	2010		4.0	10.1	9.8	9.1	9.5	9.6
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	1.4	0.80	0.80
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.5	8.6	27	33	12
Iron (Total)	N	2430	mg/kg	100	39000	42000	88000	81000	92000
Arsenic	M	2455	mg/kg	0.5	7.7	10	11	12	28
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.12	2.1	12	2.4
Chromium	M	2455	mg/kg	0.5	26	25	32	43	79
Manganese	M	2455	mg/kg	1.0	1600	1700	2800	3300	9500
Copper	M	2455	mg/kg	0.50	21	15	29	29	27
Mercury	M	2455	mg/kg	0.05	< 0.05	0.07	0.13	0.13	0.15
Nickel	M	2455	mg/kg	0.50	11	15	22	22	41
Lead	M	2455	mg/kg	0.50	13	17	200	360	120
Selenium	M	2455	mg/kg	0.25	0.96	1.1	1.6	1.6	1.2
Vanadium	U	2455	mg/kg	0.5	37	43	48	52	78
Zinc	M	2455	mg/kg	0.50	30	39	380	690	390
Organic Matter	M	2625	%	0.40	16	17	24	28	26
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.6

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-29945	22-29945	22-29945	22-29945	22-29945
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1482829	1482830	1482831	1482832	1482833
		Client Sample ID.:			AR32-1	AS32-1	AT32-1	AU29-1	AV30-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	1.3	1.3	0.6	1.0
		Date Sampled:			04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	120
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	130
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	130
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.73	0.75	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.15	0.20	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.39	< 0.10	0.57	0.47	4.0
Pyrene	M	2800	mg/kg	0.10	0.39	< 0.10	0.44	0.54	3.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.6
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.0
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	6.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.2
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	24
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-31543-1
Initial Date of Issue:	23-Aug-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	PO115623
No. of Samples:	17
Turnaround (Wkdays):	5
Date Approved:	23-Aug-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	18-Aug-2022
Date Instructed:	18-Aug-2022
Results Due:	24-Aug-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1490065	1490066	1490067	1490068	1490069	1490070	1490071	1490072	1490073
Order No.: PO115623		Client Sample Ref.:			AQ32-1	AQ23-2	R150-1	R150-2	AU32-1	3CP2-4	3CP2-5	3CP2-6	3CP2-7
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.50	1.00			0.30				
		Date Sampled:			16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM	DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-	-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	0.55	2.3	4.2	2.0	1.9	9.0	9.9	7.8	7.2
Soil Colour	N	2040		N/A	Grey	Brown	Grey	Grey	Grey	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones and Roots	Stones	Stones and Roots	Stones	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Clay	Loam	Clay	Clay
pH	M	2010		4.0	7.8	7.8	7.8	7.6	7.6	7.6	7.6	7.8	9.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	1.0	0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.0	6.7	3.0	7.6	34	2.2	0.62	4.7	1.3
Iron (Total)	N	2430	mg/kg	100	80000	58000	31000	65000	53000	110000	53000	25000	78000
Arsenic	M	2455	mg/kg	0.5	4.3	5.7	4.8	6.8	24	9.2	3.0	7.2	7.7
Cadmium	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.4	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	M	2455	mg/kg	0.5	21	28	200	33	190	55	22	110	130
Manganese	M	2455	mg/kg	1.0	2400	1100	13000	2100	6400	2600	1400	13000	7700
Copper	M	2455	mg/kg	0.50	9.4	9.1	14	15	130	22	8.3	17	16
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	0.05	8.7	0.13	< 0.05	0.06	0.08
Nickel	M	2455	mg/kg	0.50	14	18	12	16	41	17	9.9	15	16
Lead	M	2455	mg/kg	0.50	12	28	63	67	72	69	64	36	44
Selenium	M	2455	mg/kg	0.25	< 0.25	< 0.25	< 0.25	0.66	0.40	< 0.25	< 0.25	< 0.25	0.30
Vanadium	U	2455	mg/kg	0.5	58	36	340	55	200	79	44	320	240
Zinc	M	2455	mg/kg	0.50	35	100	210	88	820	400	51	98	210
Organic Matter	M	2625	%	0.40	5.6	1.8	10	11	12	12	6.9	8.5	3.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1490065	1490066	1490067	1490068	1490069	1490070	1490071	1490072	1490073
Order No.: PO115623		Client Sample Ref.:			AQ32-1	AQ23-2	R150-1	R150-2	AU32-1	3CP2-4	3CP2-5	3CP2-6	3CP2-7
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.50	1.00			0.30				
		Date Sampled:			16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM	DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	< 1.0	9.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	190	< 1.0	210
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	210	< 5.0	220
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	210	< 10	220
Benzene	M	2760	µg/kg	1.0	5.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.8	< 0.10	< 0.10	< 0.10	< 0.10	2.4	2.5	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.69	< 0.10	< 0.10	< 0.10	< 0.10	0.83	0.76	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	5.6	< 0.10	< 0.10	1.4	< 0.10	5.4	4.1	0.53	1.1
Pyrene	M	2800	mg/kg	0.10	3.8	< 0.10	< 0.10	1.1	< 0.10	4.4	3.2	0.45	1.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.2	< 0.10	< 0.10	0.57	< 0.10	3.0	2.1	< 0.10	0.66
Chrysene	M	2800	mg/kg	0.10	2.0	< 0.10	< 0.10	0.58	< 0.10	3.6	2.0	< 0.10	0.58
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.0	< 0.10	< 0.10	< 0.10	< 0.10	5.0	3.4	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.98	< 0.10	< 0.10	< 0.10	< 0.10	1.8	1.4	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.6	< 0.10	< 0.10	< 0.10	< 0.10	3.3	2.6	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	22	< 2.0	< 2.0	3.7	< 2.0	30	22	< 2.0	3.4
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1490074	1490075	1490076	1490077	1490078	1490079	1490080	1490081
Order No.: PO115623		Client Sample Ref.:			R174-1	R174-2	R174-3	R181-1	R172-1	R172-2	AS27-C	AJ22-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):										
		Date Sampled:			16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM	DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-	-	-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	0.40	0.92	2.2	0.75	0.84	0.90	15	10
Soil Colour	N	2040		N/A	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	None	None
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Clay	Clay
pH	M	2010		4.0	8.5	8.6	8.3	8.2	8.2	6.0	8.2	8.2
Cyanide (Total)	M	2300	mg/kg	0.50	0.60	1.3	1.3	1.6	< 0.50	0.80	< 0.50	1.4
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.51	12	4.3	1.4	1.2	3.8	38	36
Iron (Total)	N	2430	mg/kg	100	93000	70000	88000	65000	94000	69000	42000	25000
Arsenic	M	2455	mg/kg	0.5	6.3	5.5	5.1	18	6.9	10	3.3	3.4
Cadmium	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	M	2455	mg/kg	0.5	37	21	47	67	48	29	12	7.4
Manganese	M	2455	mg/kg	1.0	2100	1300	3400	3100	3500	1500	370	830
Copper	M	2455	mg/kg	0.50	12	13	12	11	17	8.0	4.3	11
Mercury	M	2455	mg/kg	0.05	0.10	0.07	0.05	0.14	0.37	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	14	12	14	23	17	27	11	8.5
Lead	M	2455	mg/kg	0.50	33	35	37	64	52	22	11	49
Selenium	M	2455	mg/kg	0.25	0.26	0.37	< 0.25	0.37	0.80	< 0.25	< 0.25	< 0.25
Vanadium	U	2455	mg/kg	0.5	47	30	100	100	78	38	19	8.5
Zinc	M	2455	mg/kg	0.50	89	95	120	170	170	76	31	36
Organic Matter	M	2625	%	0.40	14	11	16	17	20	12	0.67	0.97
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543	22-31543
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1490074	1490075	1490076	1490077	1490078	1490079	1490080	1490081
Order No.: PO115623			Client Sample Ref.:		R174-1	R174-2	R174-3	R181-1	R172-1	R172-2	AS27-C	AJ22-C
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):									
			Date Sampled:		16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
			Asbestos Lab:		DURHAM		DURHAM	DURHAM	DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	4.3	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	32	51	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	32	55	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	32	55	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	11	9.1	7.8	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	3.7	< 0.10	6.7	< 0.10	2.3	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.70	< 0.10	1.3	< 0.10	0.37	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.11	< 0.10	0.11	< 0.10	0.11	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.35	< 0.10	0.67	< 0.10	0.39	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.2	1.7	1.1	3.7	1.8	2.0	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.27	0.90	0.36	1.5	0.47	0.52	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	1.3	4.9	5.4	8.8	2.9	3.1	< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.10	1.0	3.6	5.3	6.6	2.1	2.2	< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.61	3.1	3.3	4.8	1.3	1.7	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.57	3.4	3.4	5.2	1.4	1.5	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.79	4.1	4.7	6.9	1.6	2.5	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.18	1.5	1.6	2.3	0.42	0.86	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.54	3.5	4.7	6.0	1.8	1.9	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	2.7	2.9	4.1	1.2	1.8	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.45	0.46	0.80	0.27	0.36	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	2.5	2.2	3.5	1.0	1.6	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	6.5	37	35	63	16	23	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-34126-2		
Initial Date of Issue:	15-Sep-2022	**Date of Re-Issue:**	23-Sep-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q22-28243	**Date Received:**	07-Sep-2022
Order No.:	115623	**Date Instructed:**	16-Sep-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	23-Sep-2022
Date Approved:	23-Sep-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-34126	22-34126	22-34126	22-34126	22-34126	22-34126
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1501688	1501689	1501690	1501691	1501692	1501693
		Client Sample ID.:			5E1-SV1	5E1-SV2	5E1-SV3	5E1-SV4	AX36-C	AX34-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			05-Sep-2022	05-Sep-2022	05-Sep-2022	05-Sep-2022	06-Sep-2022	06-Sep-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-	Fibres/Clumps	-	-	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001		0.044				
Asbestos By Fibre Counting	U	2192	%	0.001		-				
Total Asbestos	U	2192	%	0.001		0.044				
Moisture	N	2030	%	0.020	4.8	5.7	6.8	5.7	22	27
Soil Colour	N	2040		N/A	Black	Black	Brown	Brown	Grey	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	None	None
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Clay
pH	M	2010		4.0	8.4	9.8	8.7	8.4	8.6	8.2
Cyanide (Total)	M	2300	mg/kg	0.50	0.50	1.1	2.1	1.5	1.5	1.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.4	2.1	4.4	1.7	150	170
Iron (Total)	N	2430	mg/kg	100	62000	75000	52000	120000	27000	24000
Arsenic	M	2455	mg/kg	0.5	5.0	< 0.5	8.8	12	8.7	8.0
Cadmium	M	2455	mg/kg	0.10	0.18	< 0.10	0.32	0.24	0.16	0.11
Chromium	M	2455	mg/kg	0.5	450	< 0.5	72	180	29	23
Manganese	M	2455	mg/kg	1.0	12000	9.7	3500	6400	400	390
Copper	M	2455	mg/kg	0.50	19	< 0.50	16	66	17	13
Mercury	M	2455	mg/kg	0.05	0.10	< 0.05	0.13	0.08	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	38	< 0.50	17	44	23	19
Lead	M	2455	mg/kg	0.50	29	< 0.50	50	33	22	18
Selenium	M	2455	mg/kg	0.25	1.4	< 0.25	1.3	1.5	0.96	0.76
Vanadium	U	2455	mg/kg	0.5	230	< 0.5	99	130	33	27
Zinc	M	2455	mg/kg	0.50	79	< 0.50	150	76	73	64
Organic Matter	M	2625	%	0.40	25	18	15	22	3.7	3.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-34126	22-34126	22-34126	22-34126	22-34126	22-34126
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1501688	1501689	1501690	1501691	1501692	1501693
		Client Sample ID.:			5E1-SV1	5E1-SV2	5E1-SV3	5E1-SV4	AX36-C	AX34-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			05-Sep-2022	05-Sep-2022	05-Sep-2022	05-Sep-2022	06-Sep-2022	06-Sep-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	59	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	83	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	83	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	3.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	1.4	< 1.0	1.7	1.3	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	2.5	4.2	1.5	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.46	0.82	0.33	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.21	0.17	0.18	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.38	0.43	0.32	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.2	2.2	2.3	1.8	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.49	0.81	1.1	0.63	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	2.5	4.6	5.3	3.8	< 0.10	0.19
Pyrene	M	2800	mg/kg	0.10	1.9	3.5	5.3	2.9	< 0.10	0.18
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.1	2.1	3.5	1.5	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	1.5	2.8	4.5	2.0	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.5	2.9	5.2	2.1	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.46	1.0	1.8	0.76	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.99	1.9	3.9	1.4	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	1.6	3.1	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.40	0.64	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	1.7	3.1	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	12	29	45	19	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-34996-1
Initial Date of Issue:	20-Sep-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	20-Sep-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	14-Sep-2022
Date Instructed:	14-Sep-2022
Results Due:	21-Sep-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-34996	22-34996	22-34996	22-34996
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1505521	1505522	1505523	1505524
		Client Sample ID.:			5e1-SV5	5e1-SV6	5e1-SV7	5e1-SV8
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Date Sampled:			08-Sep-2022	08-Sep-2022	08-Sep-2022	08-Sep-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.4	8.0	8.3	4.1
Soil Colour	N	2040		N/A	Grey	Grey	Grey	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.2	8.9	8.8	9.0
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.6		1.7	
Total Sulphur	M	2175	%	0.010	0.58		0.57	
Chloride (Water Soluble)	M	2220	g/l	0.010	0.042		0.028	
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010		0.048	
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	1.4	2.1	0.60
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	6.1	1.5	1.2	1.4
Iron (Total)	N	2430	mg/kg	100	76000	57000	57000	57000
Arsenic	M	2455	mg/kg	0.5	9.8	5.4	5.7	10
Cadmium	M	2455	mg/kg	0.10	0.43	0.22	0.31	0.41
Chromium	M	2455	mg/kg	0.5	60	33	51	52
Manganese	M	2455	mg/kg	1.0	3200	1600	2100	2200
Copper	M	2455	mg/kg	0.50	22	11	14	36
Mercury	M	2455	mg/kg	0.05	0.09	0.08	0.10	0.08
Nickel	M	2455	mg/kg	0.50	16	9.9	14	18
Lead	M	2455	mg/kg	0.50	52	31	57	57
Selenium	M	2455	mg/kg	0.25	1.4	0.68	1.0	1.2
Vanadium	U	2455	mg/kg	0.5	85	46	57	64
Zinc	M	2455	mg/kg	0.50	120	84	100	140
Organic Matter	M	2625	%	0.40	23	19	19	20
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			Chemtest Job No.:		22-34996	22-34996	22-34996	22-34996
Quotation No.: Q22-28243			Chemtest Sample ID.:		1505521	1505522	1505523	1505524
			Client Sample ID.:		5e1-SV5	5e1-SV6	5e1-SV7	5e1-SV8
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Date Sampled:		08-Sep-2022	08-Sep-2022	08-Sep-2022	08-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	2.5	2.7	3.5	2.6
Acenaphthylene	N	2800	mg/kg	0.10	0.33	0.48	0.98	0.44
Acenaphthene	M	2800	mg/kg	0.10	0.16	0.18	0.24	0.76
Fluorene	M	2800	mg/kg	0.10	0.34	0.42	0.54	0.93
Phenanthrene	M	2800	mg/kg	0.10	1.9	2.6	3.0	5.9
Anthracene	M	2800	mg/kg	0.10	0.74	0.84	1.3	1.8
Fluoranthene	M	2800	mg/kg	0.10	3.1	4.4	6.7	8.7
Pyrene	M	2800	mg/kg	0.10	2.7	3.3	5.8	6.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.8	2.3	4.9	3.3
Chrysene	M	2800	mg/kg	0.10	1.6	2.3	5.3	3.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.8	4.0	7.6	4.9
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.87	1.3	2.5	1.6
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.9	3.2	5.7	3.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.3	2.0	4.1	2.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.33	0.40	0.93	0.59
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.3	2.0	4.0	2.4
Total Of 16 PAH's	N	2800	mg/kg	2.0	24	32	57	50
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-35446-1
Initial Date of Issue:	27-Sep-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	6
Turnaround (Wkdays):	5
Date Approved:	27-Sep-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	16-Sep-2022
Date Instructed:	16-Sep-2022
Results Due:	23-Sep-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-35446	22-35446	22-35446	22-35446	22-35446	22-35446
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1507541	1507542	1507543	1507544	1507545	1507546
		Client Sample ID.:			R182-1	R182-2	R166-1	R166-2	5E1-SV9	5E1-SV10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-		-		-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	10	9.1	5.9	6.9	7.5	7.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones and Roots	Roots and Stones	Stones	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.7	8.0	8.5	8.6	9.1	9.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	2.3	3.4	3.2	1.8	1.6
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.8	5.4	6.6	4.7	4.1	1.6
Iron (Total)	N	2430	mg/kg	100	38000	63000	49000	41000	67000	50000
Arsenic	M	2455	mg/kg	0.5	8.8	9.6	17	16	18	12
Cadmium	M	2455	mg/kg	0.10	0.40	1.6	0.52	0.53	0.76	0.51
Chromium	M	2455	mg/kg	0.5	38	65	74	64	82	51
Manganese	M	2455	mg/kg	1.0	2200	3900	3900	3400	4800	2900
Copper	M	2455	mg/kg	0.50	21	24	33	33	35	20
Mercury	M	2455	mg/kg	0.05	0.24	0.22	0.46	0.27	0.24	0.22
Nickel	M	2455	mg/kg	0.50	18	19	21	18	27	21
Lead	M	2455	mg/kg	0.50	69	230	75	68	120	65
Selenium	M	2455	mg/kg	0.25	0.72	1.3	1.5	1.5	1.9	1.4
Vanadium	U	2455	mg/kg	0.5	52	120	74	60	150	64
Zinc	M	2455	mg/kg	0.50	170	820	260	290	270	160
Organic Matter	M	2625	%	0.40	9.6	17	22	25	13	29
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-35446	22-35446	22-35446	22-35446	22-35446	22-35446
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1507541	1507542	1507543	1507544	1507545	1507546
			Client Sample ID.:		R182-1	R182-2	R166-1	R166-2	5E1-SV9	5E1-SV10
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2	0.2	0.2
			Date Sampled:		14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022	14-Sep-2022
			Asbestos Lab:		NEW-ASB		NEW-ASB		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	61	9.8	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	230	170	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	290	180	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	290	180	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	7.0	8.1	< 0.10	1.8
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	3.4	3.1	< 0.10	0.48
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.26	0.22	< 0.10	0.20
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	2.4	1.0	< 0.10	0.34
Phenanthrene	M	2800	mg/kg	0.10	1.5	0.38	28	10	0.71	1.9
Anthracene	M	2800	mg/kg	0.10	0.42	0.16	7.9	3.1	0.50	0.68
Fluoranthene	M	2800	mg/kg	0.10	2.8	0.63	50	23	2.5	3.9
Pyrene	M	2800	mg/kg	0.10	1.8	0.48	35	17	2.1	3.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.3	0.38	19	11	1.3	2.3
Chrysene	M	2800	mg/kg	0.10	1.2	0.35	20	11	1.4	2.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.0	0.49	28	18	1.8	4.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.75	0.21	10	6.5	0.63	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.3	0.41	20	12	1.3	2.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	14	10	0.95	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	2.4	1.6	0.17	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	13	8.8	0.84	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	13	3.5	260	140	14	26
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

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I/S	Insufficient Sample
U/S	Unsuitable Sample
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<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

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A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
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E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

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All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-35770-1
Initial Date of Issue:	26-Sep-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	PO115623
No. of Samples:	6
Turnaround (Wkdays):	5
Date Approved:	26-Sep-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	20-Sep-2022
Date Instructed:	20-Sep-2022
Results Due:	26-Sep-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-35770	22-35770	22-35770	22-35770	22-35770	22-35770
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1508865	1508866	1508867	1508868	1508869	1508870
		Client Sample ID.:			5ES-SV11	5E1-SV12	5E1-SV13	SMH-SS-1	SMH-SS-2	AR30-C
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	3.7
		Date Sampled:			15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.2	3.8	6.6	8.9	7.4	20
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	None
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Clay
pH	M	2010		4.0	10.3	9.2	9.5	8.7	8.8	8.5
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	0.90	1.7	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	12	6.8	8.6	7.0	7.6	5.8
Iron (Total)	N	2430	mg/kg	100	37000	52000	21000	12000	21000	11000
Arsenic	M	2455	mg/kg	0.5	7.0	9.2	16	6.8	8.4	14
Cadmium	M	2455	mg/kg	0.10	0.37	0.54	0.60	0.55	0.53	0.11
Chromium	M	2455	mg/kg	0.5	47	52	73	36	37	37
Manganese	M	2455	mg/kg	1.0	2900	3900	3900	1800	1800	870
Copper	M	2455	mg/kg	0.50	15	25	27	15	17	12
Mercury	M	2455	mg/kg	0.05	0.19	0.23	0.17	0.06	0.07	< 0.05
Nickel	M	2455	mg/kg	0.50	11	18	24	17	20	35
Lead	M	2455	mg/kg	0.50	54	82	99	39	49	28
Selenium	M	2455	mg/kg	0.25	1.1	1.5	2.0	0.68	0.79	0.98
Vanadium	U	2455	mg/kg	0.5	56	85	100	53	35	47
Zinc	M	2455	mg/kg	0.50	140	210	220	110	120	95
Organic Matter	M	2625	%	0.40	7.0	6.3	20	1.8	1.9	1.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-35770	22-35770	22-35770	22-35770	22-35770	22-35770
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1508865	1508866	1508867	1508868	1508869	1508870
			Client Sample ID.:		5ES-SV11	5E1-SV12	5E1-SV13	SMH-SS-1	SMH-SS-2	AR30-C
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2	0.2	3.7
			Date Sampled:		15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022	15-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	73	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	85	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	85	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	1.9	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.31	5.1	3.1	1.7	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.56	1.2	0.70	0.53	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.17	0.62	0.26	0.27	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.50	1.1	0.58	0.41	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	8.3	5.9	4.9	2.1	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	1.3	1.8	1.1	0.79	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	11	13	10	5.2	0.74	0.33
Pyrene	M	2800	mg/kg	0.10	7.8	9.3	7.7	4.0	0.62	0.23
Benzo[a]anthracene	M	2800	mg/kg	0.10	3.8	5.9	4.9	2.6	0.53	< 0.10
Chrysene	M	2800	mg/kg	0.10	4.2	6.0	5.4	2.5	0.46	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	5.7	8.4	8.0	4.6	0.71	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.2	2.6	2.5	1.5	0.26	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	4.2	6.4	6.4	3.3	0.49	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.7	4.4	4.5	2.7	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.42	0.83	0.91	0.55	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.5	4.3	4.0	2.6	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	56	77	65	35	3.8	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-36111-1
Initial Date of Issue:	28-Sep-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	PO115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	28-Sep-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	22-Sep-2022
Date Instructed:	22-Sep-2022
Results Due:	28-Sep-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-36111	22-36111	22-36111	22-36111
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1510439	1510440	1510441	1510442
				Sample Location:	5E1-SV14	5E1-SV15	5E1-SV16	5E1-SV17
				Sample Type:	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.2	0.2	0.2	0.2
				Date Sampled:	20-Sep-2022	20-Sep-2022	20-Sep-2022	20-Sep-2022
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	6.3	5.4	5.6	5.3
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.1	9.0	9.2	9.2
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.2			
Total Sulphur	M	2175	%	0.010	0.44			
Chloride (Water Soluble)	M	2220	g/l	0.010	0.022			
Nitrate (Water Soluble)	N	2220	g/l	0.010	0.015			
Cyanide (Total)	M	2300	mg/kg	0.50	1.0	1.6	1.5	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.5	1.4	< 0.50	2.6
Iron (Total)	N	2430	mg/kg	100	37000	35000	50000	60000
Sulphate (Acid Soluble)	U	2430	%	0.010	0.61			
Arsenic	M	2455	mg/kg	0.5	15	19	14	14
Cadmium	M	2455	mg/kg	0.10	0.49	1.9	0.65	1.2
Chromium	M	2455	mg/kg	0.5	55	40	59	65
Manganese	M	2455	mg/kg	1.0	3700	8500	4300	5200
Copper	M	2455	mg/kg	0.50	22	22	33	32
Mercury	M	2455	mg/kg	0.05	0.20	0.12	0.94	0.26
Nickel	M	2455	mg/kg	0.50	22	21	30	23
Lead	M	2455	mg/kg	0.50	71	110	91	140
Selenium	M	2455	mg/kg	0.25	1.9	1.7	1.8	4.8
Vanadium	U	2455	mg/kg	0.5	77	67	83	89
Zinc	M	2455	mg/kg	0.50	170	610	250	360
Organic Matter	M	2625	%	0.40	18	8.9	16	8.4
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	110
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	410
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	520

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-36111	22-36111	22-36111	22-36111
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1510439	1510440	1510441	1510442
			Sample Location:		5E1-SV14	5E1-SV15	5E1-SV16	5E1-SV17
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2
			Date Sampled:		20-Sep-2022	20-Sep-2022	20-Sep-2022	20-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	3.1
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	9.4
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	6.7
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	15	23
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	18	220
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	33	260
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	33	780
Benzene	M	2760	µg/kg	1.0	6.7	2.6	5.2	15
Toluene	M	2760	µg/kg	1.0	5.7	2.6	3.0	5.5
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	1.8
m & p-Xylene	M	2760	µg/kg	1.0	3.8	< 1.0	2.2	6.0
o-Xylene	M	2760	µg/kg	1.0	1.3	< 1.0	< 1.0	1.2
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	1.4	2.5	4.6
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.33	0.59	1.1
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.21	0.19	0.17
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.40	0.47	0.60
Phenanthrene	M	2800	mg/kg	0.10	1.3	2.8	2.5	5.5
Anthracene	M	2800	mg/kg	0.10	0.43	0.80	0.98	1.5
Fluoranthene	M	2800	mg/kg	0.10	2.3	4.6	4.9	10
Pyrene	M	2800	mg/kg	0.10	1.9	3.7	4.1	8.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.2	1.8	3.0	5.4
Chrysene	M	2800	mg/kg	0.10	1.2	1.8	3.1	5.3
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.8	3.0	4.4	7.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.60	1.1	1.5	2.5
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.4	2.3	3.4	5.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	1.6	2.4	3.8
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.27	0.41	0.76
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	1.5	2.1	3.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	12	28	37	65
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-36111	22-36111	22-36111	22-36111
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1510439	1510440	1510441	1510442
			Sample Location:		5E1-SV14	5E1-SV15	5E1-SV16	5E1-SV17
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2	0.2
			Date Sampled:		20-Sep-2022	20-Sep-2022	20-Sep-2022	20-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

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N	Unaccredited
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eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-37307-1
Initial Date of Issue:	07-Oct-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	07-Oct-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	30-Sep-2022
Date Instructed:	30-Sep-2022
Results Due:	06-Oct-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37307	22-37307	22-37307	22-37307
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515774	1515775	1515776	1515777
			Sample Location:		5E1-SV23	5E1-SV24	5E1-SV25	5E1-SV26
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	4.9	5.2	4.7	3.7
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.2	9.1	9.2	8.9
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	1.3			
Total Sulphur	M	2175	%	0.010	0.71			
Chloride (Water Soluble)	M	2220	g/l	0.010	0.027			
Nitrate (Water Soluble)	N	2220	g/l	0.010	0.010			
Cyanide (Total)	M	2300	mg/kg	0.50	0.70	1.3	1.7	1.3
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.7	1.6	0.86	0.86
Iron (Total)	N	2430	mg/kg	100	40000	35000	59000	81000
Sulphate (Acid Soluble)	U	2430	%	0.010	0.68			
Arsenic	M	2455	mg/kg	0.5	6.8	5.7	9.7	10
Cadmium	M	2455	mg/kg	0.10	0.28	0.18	0.63	0.65
Chromium	M	2455	mg/kg	0.5	30	29	98	220
Manganese	M	2455	mg/kg	1.0	1900	1900	4900	8200
Copper	M	2455	mg/kg	0.50	12	13	34	25
Mercury	M	2455	mg/kg	0.05	0.07	0.05	0.20	0.15
Nickel	M	2455	mg/kg	0.50	12	9.8	29	23
Lead	M	2455	mg/kg	0.50	37	28	87	86
Selenium	M	2455	mg/kg	0.25	1.3	0.99	1.6	1.4
Vanadium	U	2455	mg/kg	0.5	48	50	120	160
Zinc	M	2455	mg/kg	0.50	87	73	260	250
Organic Matter	M	2625	%	0.40	27	30	9.4	13
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37307	22-37307	22-37307	22-37307
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515774	1515775	1515776	1515777
			Sample Location:		5E1-SV23	5E1-SV24	5E1-SV25	5E1-SV26
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.93	1.9	1.6
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.28	0.68	0.55
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.12	0.17	0.16
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.25	0.57	0.43
Phenanthrene	M	2800	mg/kg	0.10	1.1	1.5	4.3	4.7
Anthracene	M	2800	mg/kg	0.10	0.31	0.51	1.2	1.5
Fluoranthene	M	2800	mg/kg	0.10	1.8	3.1	8.1	8.5
Pyrene	M	2800	mg/kg	0.10	1.5	2.4	5.8	6.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.95	1.9	3.9	3.7
Chrysene	M	2800	mg/kg	0.10	1.0	2.0	3.7	3.7
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.4	3.0	5.6	5.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.48	0.85	1.9	1.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.2	2.3	4.4	4.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.93	1.6	3.1	3.2
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.22	0.40	0.47	0.53
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.69	1.5	2.5	2.5
Total Of 16 PAH's	N	2800	mg/kg	2.0	12	23	48	48
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37307	22-37307	22-37307	22-37307
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515774	1515775	1515776	1515777
			Sample Location:		5E1-SV23	5E1-SV24	5E1-SV25	5E1-SV26
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-42945-1
Initial Date of Issue:	11-Nov-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	11-Nov-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	09-Nov-2022
Date Instructed:	09-Nov-2022
Results Due:	15-Nov-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-42945	22-42945	22-42945	22-42945
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1541583	1541584	1541585	1541586
		Sample Location:			5E1-SV2-N	5E1-SV2-S	5E1-SV2-E	5E1-SV2-W
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.2	0.2	0.2	0.2
		Date Sampled:			08-Nov-2022	08-Nov-2022	08-Nov-2022	08-Nov-2022
		Asbestos Lab:			DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

Test Methods

SOP	Title	Parameters included	Method summary
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry

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customerservices@chemtest.com

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Atkins Global Ltd
Project Jonah site office
Llan Coed House
Suite 24
Coed Darcy
Llandarcy
SA10 6HJ

Attention: John Fitzgerald

CERTIFICATE OF ANALYSIS

Date:	18 June 2018
Customer:	H_ATKINS_LDC
Sample Delivery Group (SDG):	180516-60
Your Reference:	
Location:	Llanwern
Report No:	460557

This report has been revised and directly supersedes 459951 in its entirety.

We received 46 samples on Wednesday May 16, 2018 and 46 of these samples were scheduled for analysis which was completed on Monday June 18, 2018. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

Approved By:



Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
17564571	TP3BE6		0.50 - 0.50	15/05/2018
17564581	TP3BE6		1.00 - 1.00	15/05/2018
17564585	TP3BE6		1.50 - 1.50	15/05/2018
17564647	TP3BE7		0.50 - 0.50	15/05/2018
17564651	TP3BE7		1.20 - 1.20	15/05/2018
17564658	TP3BE7		1.80 - 1.80	15/05/2018
17564634	TP3BE8		1.00 - 1.00	15/05/2018
17564639	TP3BE8		2.00 - 2.00	15/05/2018
17564643	TP3BE8-V		2.20 - 2.20	15/05/2018
17564468	TP3BF1		0.50 - 0.50	15/05/2018
17564526	TP3BF1		1.00 - 1.00	15/05/2018
17564575	TP3BF1		2.00 - 2.00	15/05/2018
17564625	TP3BF1		3.00 - 3.00	15/05/2018
17564670	TP3BF2		0.50 - 0.50	15/05/2018
17564675	TP3BF2		1.00 - 1.00	15/05/2018
17564682	TP3BF2		1.80 - 1.80	15/05/2018
17564689	TP3BF2		2.30 - 2.30	15/05/2018
17564478	TP3BF3		0.50 - 0.50	15/05/2018
17564485	TP3BF3		1.00 - 1.00	15/05/2018
17564492	TP3BF3		2.00 - 2.00	15/05/2018
17564500	TP3BF4		0.50 - 0.50	15/05/2018
17564504	TP3BF4		1.00 - 1.00	15/05/2018
17564509	TP3BF4		2.00 - 2.00	15/05/2018
17564513	TP3BF4		2.50 - 2.50	15/05/2018
17564531	TP3BF5		0.50 - 0.50	15/05/2018
17564536	TP3BF5		1.00 - 1.00	15/05/2018
17564540	TP3BF5		1.50 - 1.50	15/05/2018
17564544	TP3BF5		2.00 - 2.00	15/05/2018
17564552	TP3BF6		0.30 - 0.30	15/05/2018
17564556	TP3BF6		0.70 - 0.70	15/05/2018
17564560	TP3BF6		1.00 - 1.00	15/05/2018
17564567	TP3BF6		1.50 - 1.50	15/05/2018
17564590	TP3BF7		0.50 - 0.50	15/05/2018
17564594	TP3BF7		1.20 - 1.20	15/05/2018
17564598	TP3BF7		1.70 - 1.70	15/05/2018
17564602	TP3BF7		2.30 - 2.30	15/05/2018
17564612	TP3BF8		0.50 - 0.50	15/05/2018
17564616	TP3BF8		1.00 - 1.00	15/05/2018
17564620	TP3BF8		1.50 - 1.50	15/05/2018
17564663	TP3BF1-V		3.10 - 3.10	15/05/2018
17564474	TP3BF2-V		2.70 - 2.70	15/05/2018
17564496	TP3BF3-V		2.20 - 2.20	15/05/2018
17564521	TP3BF4-V		2.70 - 2.70	15/05/2018
17564548	TP3BF5-V		2.40 - 2.40	15/05/2018
17564608	TP3BF7-V		2.70 - 2.70	15/05/2018
17564630	TP3BF8-V		2.00 - 2.00	15/05/2018

Maximum Sample/Coolbox Temperature (°C) :

ISO5667-3 Water quality - Sampling - Part3 -

During Transportation samples shall be stored in a cooling device capable of maintaining a temperature of (5±3)°C.

16.4

ALS have data which show that a cool box with 4 frozen icepacks is capable of maintaining pre-chilled samples at a temperature of (5±3)°C for a period of up to 24hrs.

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)																			
			17564571			17564581			17564585			17564647			17564651			17564658			17564634	
			Customer Sample Reference																			
			TP3BE6			TP3BE6			TP3BE6			TP3BE7			TP3BE7			TP3BE7			TP3BE8	
			AGS Reference																			
			Depth (m)			0.50 - 0.50			1.00 - 1.00			1.50 - 1.50			0.50 - 0.50			1.20 - 1.20			1.80 - 1.80		1.00 - 1.00
			Container	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkali Metals by iCap-OES (Soil)	All	NDPs: 0 Tests: 39		X		X		X		X			X			X			X			
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
Ammonium Soil by Titration	All	NDPs: 0 Tests: 46		X			X			X			X			X			X				
Anions by Kone (soil)	All	NDPs: 0 Tests: 22		X						X			X							X			
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 22	X						X			X						X			X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2	X																				
CEN Readings	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 45		X			X			X			X			X			X				
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 46		X			X			X			X			X			X				
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 46		X			X			X			X			X			X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X			
GRO by GC-FID (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	

17564670	TP3BF2		0.50 - 0.50	250g Amber Jar (ALE210)	S	X		X					X			X		X		
				1kg TUB	S		X					X		X	X		X			X
17564625	TP3BF1		3.00 - 3.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X		
				1kg TUB	S		X					X		X	X		X			X
17564575	TP3BF1		2.00 - 2.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X		
				1kg TUB	S		X			X		X		X	X		X			X
17564526	TP3BF1		1.00 - 1.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X		
				1kg TUB	S		X					X		X	X		X			X
17564468	TP3BF1		0.50 - 0.50	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X		
				1kg TUB	S		X			X		X		X	X		X			X
17564643	TP3BE8-V		2.20 - 2.20	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S			X					X			X		X		
17564639	TP3BE8		2.00 - 2.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X		
				1kg TUB	S		X			X		X		X	X		X			X
17564634	TP3BE8		1.00 - 1.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X		

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	17564571			17564581			17564585			17564647			17564651			17564658			17564634
			Customer Sample Reference	TP3BE6			TP3BE6			TP3BE6			TP3BE7			TP3BE7			TP3BE7			TP3BE8
			AGS Reference																			
			Depth (m)	0.50 - 0.50			1.00 - 1.00			1.50 - 1.50			0.50 - 0.50			1.20 - 1.20			1.80 - 1.80			1.00 - 1.00
			Container	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Mercury Dissolved	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
PAH by GCMS	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
pH	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
pH Value	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
Sample description	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
Total Sulphate	All	NDPs: 0 Tests: 22			X						X			X						X		
Total Sulphur	All	NDPs: 0 Tests: 22			X						X			X						X		
TPH CWG (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
VOC MS (S)	All	NDPs: 0 Tests: 46				X			X			X			X			X			X		
VOC MS (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X

17564670	TP3BF2		0.50 - 0.50	250g Amber Jar (ALE210)	S		X	X		X		X	X	X				X		
				1kg TUB	S	X			X		X						X			X
17564625	TP3BF1		3.00 - 3.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X				X		
				1kg TUB	S	X			X		X						X			X
17564575	TP3BF1		2.00 - 2.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X		X		
				1kg TUB	S	X			X		X						X			X
17564526	TP3BF1		1.00 - 1.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X				X		
				1kg TUB	S	X			X		X						X			X
17564468	TP3BF1		0.50 - 0.50	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X		X		
				1kg TUB	S	X			X		X						X			X
17564643	TP3BE8-V		2.20 - 2.20	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X				X		
17564639	TP3BE8		2.00 - 2.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X		X		
				1kg TUB	S	X			X		X						X			X
17564634	TP3BE8		1.00 - 1.00	60g VOC (ALE215)	S														X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X		X		

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			17564670	17564675			17564682			17564689			17564478			17564485			17564492	
Customer Sample Reference			TP3BF2	TP3BF2			TP3BF2			TP3BF2			TP3BF3			TP3BF3			TP3BF3	
AGS Reference																				
Depth (m)			0.50 - 0.50	1.00 - 1.00			1.80 - 1.80			2.30 - 2.30			0.50 - 0.50			1.00 - 1.00			2.00 - 2.00	
Container			60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkali Metals by iCap-OES (Soil)	All	NDPs: 0 Tests: 39			X			X			X			X			X			X	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
Ammonium Soil by Titration	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
Anions by Kone (soil)	All	NDPs: 0 Tests: 22			X						X			X						X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 22		X						X			X						X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2								X											
CEN Readings	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 45			X			X			X			X			X			X	
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 46	X			X			X			X			X			X			X
GRO by GC-FID (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		

17564540	TP3BF5		1.50 - 1.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X					
				1kg TUB	S		X					X		X	X		X					X
17564536	TP3BF5		1.00 - 1.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X	X			X			X		X					
				1kg TUB	S		X			X		X		X	X		X					X
17564531	TP3BF5		0.50 - 0.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X					
				1kg TUB	S		X					X		X	X		X					X
17564513	TP3BF4		2.50 - 2.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X					
				1kg TUB	S		X					X		X	X		X					X
17564509	TP3BF4		2.00 - 2.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X					
				1kg TUB	S		X			X		X		X	X		X					X
17564504	TP3BF4		1.00 - 1.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X					X			X		X					
				1kg TUB	S		X					X		X	X		X					X
17564500	TP3BF4		0.50 - 0.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X		X	X				X			X		X					
				1kg TUB	S		X			X		X		X	X		X					X

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			17564670	17564675			17564682			17564689			17564478			17564485			17564492	
Customer Sample Reference			TP3BF2	TP3BF2			TP3BF2			TP3BF2			TP3BF3			TP3BF3			TP3BF3	
AGS Reference																				
Depth (m)			0.50 - 0.50	1.00 - 1.00			1.80 - 1.80			2.30 - 2.30			0.50 - 0.50			1.00 - 1.00			2.00 - 2.00	
Container			60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Mercury Dissolved	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
PAH by GCMS	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
pH	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
pH Value	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
Sample description	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
Total Sulphate	All	NDPs: 0 Tests: 22			X						X			X						X	
Total Sulphur	All	NDPs: 0 Tests: 22			X						X			X						X	
TPH CWG (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X	
VOC MS (S)	All	NDPs: 0 Tests: 46	X			X			X			X			X			X			X
VOC MS (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X		

17564540	TP3BF5		1.50 - 1.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X					X			
				1kg TUB	S	X			X		X							X				X
17564536	TP3BF5		1.00 - 1.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X			X			
				1kg TUB	S	X			X		X							X				X
17564531	TP3BF5		0.50 - 0.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X					X			
				1kg TUB	S	X			X		X							X				X
17564513	TP3BF4		2.50 - 2.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X					X			
				1kg TUB	S	X			X		X							X				X
17564509	TP3BF4		2.00 - 2.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X			X			
				1kg TUB	S	X			X		X							X				X
17564504	TP3BF4		1.00 - 1.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X					X			
				1kg TUB	S	X			X		X							X				X
17564500	TP3BF4		0.50 - 0.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S		X	X		X		X	X	X	X	X			X			
				1kg TUB	S	X			X		X							X				X

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
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SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	17564544			17564552			17564556			17564560			17564567			17564590			17564594
			Customer Sample Reference	TP3BF5			TP3BF6			TP3BF6			TP3BF6			TP3BF6			TP3BF7			TP3BF7
			AGS Reference																			
			Depth (m)	2.00 - 2.00			0.30 - 0.30			0.70 - 0.70			1.00 - 1.00			1.50 - 1.50			0.50 - 0.50			1.20 - 1.20
			Container	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Alkali Metals by iCap-OES (Soil)	All	NDPs: 0 Tests: 39			X			X			X			X			X			X		
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
Ammonium Soil by Titration	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
Anions by Kone (soil)	All	NDPs: 0 Tests: 22			X			X						X								
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 22		X			X						X									X
CEN Readings	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 45			X			X			X			X			X			X		
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
EPH CWG (Aromatic) Aqueous GC (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 46				X			X			X			X			X			X		
GRO by GC-FID (W)	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X
Mercury Dissolved	All	NDPs: 0 Tests: 38		X			X			X			X			X			X			X

17564474	TP3BF2-V		2.70 - 2.70	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X								X			X			
17564663	TP3BF1-V		3.10 - 3.10	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S				X				X				X			X			
17564620	TP3BF8		1.50 - 1.50	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X	X			X				X			X			
				1kg TUB	S		X				X	X		X	X			X				X	X
17564616	TP3BF8		1.00 - 1.00	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X				X				X			X			
				1kg TUB	S		X					X		X	X			X				X	X
17564612	TP3BF8		0.50 - 0.50	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X	X			X				X			X			
				1kg TUB	S		X				X	X		X	X			X				X	X
17564602	TP3BF7		2.30 - 2.30	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X	X			X				X			X			
				1kg TUB	S		X				X	X		X	X			X				X	X
17564598	TP3BF7		1.70 - 1.70	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X				X				X			X			
				1kg TUB	S		X					X		X	X			X				X	X
17564594	TP3BF7		1.20 - 1.20	60g VOC (ALE215)	S																X		
				250g Amber Jar (ALE210)	S	X			X	X			X				X			X			

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)																			
			17564544			17564552			17564556			17564560			17564567			17564590			17564594	
			Customer Sample Reference																			
			TP3BF5			TP3BF6			TP3BF6			TP3BF6			TP3BF6			TP3BF7			TP3BF7	
			AGS Reference																			
			Depth (m)																			
			2.00 - 2.00			0.30 - 0.30			0.70 - 0.70			1.00 - 1.00			1.50 - 1.50			0.50 - 0.50			1.20 - 1.20	
			Container																			
			1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB	
			Sample Type																			
			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Metals in solid samples by OES	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
PAH by GCMS	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
pH	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
pH Value	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
Sample description	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
Total Organic Carbon	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
Total Sulphate	All	NDPs: 0 Tests: 22		X			X						X									
Total Sulphur	All	NDPs: 0 Tests: 22		X			X						X									
TPH CWG (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 46		X			X			X			X			X			X			
VOC MS (S)	All	NDPs: 0 Tests: 46			X			X			X			X			X			X		
VOC MS (W)	All	NDPs: 0 Tests: 38	X			X			X			X			X			X			X	

17564474	TP3BF2-V		2.70 - 2.70	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X					X				
17564663	TP3BF1-V		3.10 - 3.10	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X					X				
17564620	TP3BF8		1.50 - 1.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X	X	X			X				
				1kg TUB	S			X		X							X					X	
17564616	TP3BF8		1.00 - 1.00	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X					X				
				1kg TUB	S			X		X							X					X	
17564612	TP3BF8		0.50 - 0.50	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X			X		X	X	X	X	X							
				1kg TUB	S		X	X		X							X	X				X	
17564602	TP3BF7		2.30 - 2.30	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X	X	X			X				
				1kg TUB	S			X		X							X					X	
17564598	TP3BF7		1.70 - 1.70	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X					X				
				1kg TUB	S			X		X							X					X	
17564594	TP3BF7		1.20 - 1.20	60g VOC (ALE215)	S																	X	
				250g Amber Jar (ALE210)	S	X	X		X		X	X	X	X	X			X				

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			17564496		17564521		17564548		17564608		17564630	
Customer Sample Reference			TP3BF3-V		TP3BF4-V		TP3BF5-V		TP3BF7-V		TP3BF8-V	
AGS Reference												
Depth (m)			2.20 - 2.20		2.70 - 2.70		2.40 - 2.40		2.70 - 2.70		2.00 - 2.00	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 46	X		X		X		X		X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 45	X		X		X		X		X	
EPH CWG (Aliphatic) GC (S)	All	NDPs: 0 Tests: 46	X		X		X		X		X	
EPH CWG (Aromatic) GC (S)	All	NDPs: 0 Tests: 46	X		X		X		X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 46		X		X		X		X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 46	X		X		X		X		X	
PAH by GCMS	All	NDPs: 0 Tests: 46	X		X		X		X		X	
pH	All	NDPs: 0 Tests: 46	X		X		X		X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 46	X		X		X		X		X	
Sample description	All	NDPs: 0 Tests: 46	X		X		X		X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 46	X		X		X		X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 46	X		X		X		X		X	
VOC MS (S)	All	NDPs: 0 Tests: 46		X		X		X		X		X

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
17564571	TP3BE6	0.50 - 0.50	Dark Brown	Sand	None	Stones
17564581	TP3BE6	1.00 - 1.00	Red	Sand	Stones	None
17564585	TP3BE6	1.50 - 1.50	Dark Brown	Sand	Stones	Crushed Brick
17564647	TP3BE7	0.50 - 0.50	Dark Brown	Sandy Loam	Crushed Brick	Stones
17564651	TP3BE7	1.20 - 1.20	Dark Brown	Sand	Stones	None
17564658	TP3BE7	1.80 - 1.80	Dark Brown	Sandy Loam	Stones	Vegetation
17564634	TP3BE8	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	Vegetation
17564639	TP3BE8	2.00 - 2.00	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564643	TP3BE8-V	2.20 - 2.20	Dark Brown	Sandy Clay	Stones	Vegetation
17564468	TP3BF1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
17564526	TP3BF1	1.00 - 1.00	Dark Brown	Sand	Stones	None
17564575	TP3BF1	2.00 - 2.00	Dark Brown	Sand	Stones	None
17564625	TP3BF1	3.00 - 3.00	Dark Brown	Sand	Stones	None
17564670	TP3BF2	0.50 - 0.50	Black	Sand	Stones	None
17564675	TP3BF2	1.00 - 1.00	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564682	TP3BF2	1.80 - 1.80	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564689	TP3BF2	2.30 - 2.30	Dark Brown	Sand	Stones	None
17564478	TP3BF3	0.50 - 0.50	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564485	TP3BF3	1.00 - 1.00	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564492	TP3BF3	2.00 - 2.00	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564500	TP3BF4	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	None
17564504	TP3BF4	1.00 - 1.00	Dark Brown	Sandy Loam	Crushed Brick	Stones
17564509	TP3BF4	2.00 - 2.00	Dark Brown	Loamy Sand	Stones	None
17564513	TP3BF4	2.50 - 2.50	Dark Brown	Silt Loam	None	None
17564531	TP3BF5	0.50 - 0.50	Red	Sand	Stones	None
17564536	TP3BF5	1.00 - 1.00	Dark Brown	Sand	Stones	None
17564540	TP3BF5	1.50 - 1.50	Dark Brown	Stone/Soil	Stones	None
17564544	TP3BF5	2.00 - 2.00	Dark Brown	Loamy Sand	Stones	None
17564552	TP3BF6	0.30 - 0.30	Red	Sand	Stones	Brick
17564556	TP3BF6	0.70 - 0.70	Red	Sand	Stones	None
17564560	TP3BF6	1.00 - 1.00	Light Brown	Loamy Sand	Stones	None
17564567	TP3BF6	1.50 - 1.50	Dark Brown	Sandy Loam	Crushed Brick	Stones
17564590	TP3BF7	0.50 - 0.50	Dark Brown	Sand	Stones	Crushed Brick
17564594	TP3BF7	1.20 - 1.20	Dark Brown	Sand	Stones	Vegetation
17564598	TP3BF7	1.70 - 1.70	Dark Brown	Sand	Stones	Crushed Brick
17564602	TP3BF7	2.30 - 2.30	Dark Brown	Sand	Stones	Vegetation
17564612	TP3BF8	0.50 - 0.50	Dark Brown	Sand	Stones	None
17564616	TP3BF8	1.00 - 1.00	Dark Brown	Sand	Stones	Crushed Brick

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

			Colour	Description	Inclusions	Inclusions 2
17564620	TP3BF8	1.50 - 1.50	Dark Brown	Loamy Sand	Crushed Brick	Stones
17564663	TP3BF1-V	3.10 - 3.10	Grey	Silty Clay Loam	None	None
17564474	TP3BF2-V	2.70 - 2.70	Black	Clay	None	None
17564496	TP3BF3-V	2.20 - 2.20	Dark Brown	Sandy Clay	Stones	Vegetation
17564521	TP3BF4-V	2.70 - 2.70	Grey	Silty Clay Loam	None	None
17564548	TP3BF5-V	2.40 - 2.40	Dark Brown	Sandy Clay	None	Vegetation
17564608	TP3BF7-V	2.70 - 2.70	Grey	Clay	None	None
17564630	TP3BF8-V	2.00 - 2.00	Black	Sandy Clay Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564571	17564581	17564585	17564647	17564651	17564658
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.9	4.8	9.6	0.14	11	3
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0106 M	0.0105 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132		0.169		0.178	0.211		0.276
Sulphate, Total potential	<0.06 %	TM132		0.507		0.534	0.633		0.828
Soil Organic Matter (SOM)	<0.35 %	TM132		1.52 #	1.27 #	1.04 #	1.21 #	0.667 #	1.43 #
pH	1 pH Units	TM133		12.6 M	11.2 M	11 M	12.6 M	12.1 M	12.6 M
Cyanide, Total	<1 mg/kg	TM153		2.62 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.5 M	16.3 M	91.9 M	7.41 M	19.8 M	13.9 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	2.31 M	<0.2 M	<0.2 M	1.39 M
Chromium	<0.9 mg/kg	TM181		801 M	203 M	189 M	559 M	119 M	425 M
Copper	<1.4 mg/kg	TM181		17.7 M	<14 M	<14 M	15.7 M	44.2 M	42.7 M
Iron	<1000 mg/kg	TM181		175000 #	390000 #	211000 #	173000 #	599000 #	235000 #
Lead	<0.7 mg/kg	TM181		35.5 M	25.6 M	82.7 M	21 M	410 M	820 M
Manganese	<0.13 mg/kg	TM181		28100 M	12700 M	5340 M	47100 M	42100 M	40900 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		12.4 M	21.6 M	86.7 M	11.8 M	19.9 M	26.2 M
Selenium	<1 mg/kg	TM181		18.5 #	<10 #	<10 #	15.3 #	18 #	25.9 #
Vanadium	<0.2 mg/kg	TM181		528 #	215 #	414 #	763 #	125 #	1110 #
Zinc	<1.9 mg/kg	TM181		117 M	72.6 M	312 M	119 M	172 M	274 M
Sulphate, acid soluble (total)	<0.02 %	TM221		0.295		0.25	0.305		0.458
Calcium	<21 mg/kg	TM224		222000	87800	155000	222000	117000	217000
Magnesium	<8 mg/kg	TM224		21700	8960	9150	38200	13100	15000
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243		<0.004 M		0.315 M	0.0235 M		0.0162 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		N/A					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1	TP3BF1	TP3BF1
			Depth (m)	1.00 - 1.00	2.00 - 2.00	2.20 - 2.20	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564634	17564639	17564643	17564468	17564526	17564575
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		3	4.2	18	10	9.3	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	170 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.011 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.011 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132		0.314	0.166		0.599		0.752
Sulphate, Total potential	<0.06 %	TM132		0.942	0.498		1.8		2.26
Soil Organic Matter (SOM)	<0.35 %	TM132		2.45 #	3.22 #	1.25 #	12 #	17.2 #	6.05 #
pH	1 pH Units	TM133		11.7 M	11 M	7.41 M	11.6 M	12 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	8.48 M	3.31 M	2.44 M
Arsenic	<0.6 mg/kg	TM181		16 M	13 M	12.6 M	9.81 M	9.97 M	30.4 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	0.132 M	<0.2 M	0.231 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		143 M	103 M	32.1 M	310 M	129 M	472 M
Copper	<1.4 mg/kg	TM181		16.3 M	30.2 M	10.5 M	14.5 M	14.3 M	82.2 M
Iron	<1000 mg/kg	TM181		168000 #	109000 #	35000 #	100000 #	63700 #	314000 #
Lead	<0.7 mg/kg	TM181		40.5 M	52.7 M	30.2 M	46.4 M	20.5 M	31.6 M
Manganese	<0.13 mg/kg	TM181		15100 M	6640 M	383 M	27000 M	13600 M	25500 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<0.14 M	1.5 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		28.3 M	37.2 M	40.2 M	12.4 M	11.6 M	97.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<1 #	18.7 #	11.5 #	14.8 #
Vanadium	<0.2 mg/kg	TM181		305 #	202 #	62.5 #	1340 #	496 #	1110 #
Zinc	<1.9 mg/kg	TM181		129 M	113 M	128 M	342 M	97.5 M	114 M
Sulphate, acid soluble (total)	<0.02 %	TM221		0.469	0.246		0.763		0.865
Calcium	<21 mg/kg	TM224		153000	76900		205000	167000	159000
Magnesium	<8 mg/kg	TM224		23100	15000		24400	18100	7020
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243		0.19 M	0.147 M		0.159 M		0.167 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3
			Depth (m)	3.00 - 3.00	0.50 - 0.50	1.00 - 1.00	1.80 - 1.80	2.30 - 2.30	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564625	17564670	17564675	17564682	17564689	17564478
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	11	2.3	13	13	8.2
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0115 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0112 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132				0.358		0.299	0.208
Sulphate, Total potential	<0.06 %	TM132				1.07		0.897	0.624
Soil Organic Matter (SOM)	<0.35 %	TM132		0.821 #	21.6 #	3.55 #	3.41 #	4.53 #	6.86 #
pH	1 pH Units	TM133		12.6 M	10.9 M	11.9 M	12.3 M	10.5 M	11.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.63 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.09 M	12.7 M	7.89 M	15.5 M	24.8 M	16 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.28 M	<0.2 M	0.265 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		879 M	196 M	419 M	507 M	602 M	50.4 M
Copper	<1.4 mg/kg	TM181		25.4 M	37.2 M	<14 M	42.3 M	110 M	16.9 M
Iron	<1000 mg/kg	TM181		166000 #	134000 #	166000 #	215000 #	376000 #	340000 #
Lead	<0.7 mg/kg	TM181		14.4 M	93.3 M	35.8 M	45.3 M	39.4 M	38.1 M
Manganese	<0.13 mg/kg	TM181		38800 M	21700 M	>50000 M	36100 M	45000 M	14300 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		19.7 M	33.7 M	9.24 M	33.9 M	73 M	19.6 M
Selenium	<1 mg/kg	TM181		36 #	15.6 #	30.7 #	19.7 #	25.7 #	<10 #
Vanadium	<0.2 mg/kg	TM181		1440 #	1100 #	2880 #	677 #	753 #	224 #
Zinc	<1.9 mg/kg	TM181		41.3 M	183 M	52 M	337 M	87.7 M	64.9 M
Sulphate, acid soluble (total)	<0.02 %	TM221				0.609		0.602	0.307
Calcium	<21 mg/kg	TM224		226000		223000	165000	165000	92800
Magnesium	<8 mg/kg	TM224		8940	6350	7490	7410	4930	5000
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243				0.124 M		0.0365 M	0.108 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						N/A	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF3	TP3BF3	TP3BF4	TP3BF4	TP3BF4	TP3BF4
			Depth (m)	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00	2.50 - 2.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564485	17564492	17564500	17564504	17564509	17564513
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.8	6.9	8.3	11	10	27
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132			0.301	0.106		0.281	
Sulphate, Total potential	<0.06 %	TM132			0.903	0.318		0.843	
Soil Organic Matter (SOM)	<0.35 %	TM132		6.02 #	2.48 #	11.3 #	28.8 #	12.6 #	14.4 #
pH	1 pH Units	TM133		11.2 M	11.4 M	11 M	9.45 M	10.8 M	11 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.22 M	2.9 M	7.85 M
Arsenic	<0.6 mg/kg	TM181		15 M	12.6 M	15.7 M	17.8 M	20.4 M	32.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	0.206 M	1.42 M	3.53 M	8.97 M
Chromium	<0.9 mg/kg	TM181		11 M	269 M	<9 M	17.3 M	<9 M	<9 M
Copper	<1.4 mg/kg	TM181		<14 M	24.4 M	22.3 M	24 M	19.5 M	37.2 M
Iron	<1000 mg/kg	TM181		170000 #	248000 #	390000 #	237000 #	207000 #	618000 #
Lead	<0.7 mg/kg	TM181		43 M	18.7 M	170 M	430 M	952 M	2280 M
Manganese	<0.13 mg/kg	TM181		5010 M	21600 M	6210 M	5100 M	5560 M	11600 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	1.65 M
Nickel	<0.2 mg/kg	TM181		23.1 M	12.6 M	31.6 M	26.1 M	22.1 M	35.7 M
Selenium	<1 mg/kg	TM181		<10 #	13 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		87.7 #	374 #	52.2 #	158 #	67.4 #	198 #
Zinc	<1.9 mg/kg	TM181		95 M	49.5 M	393 M	986 M	2210 M	5280 M
Sulphate, acid soluble (total)	<0.02 %	TM221			0.561	0.132		0.283	
Calcium	<21 mg/kg	TM224		146000	149000	47600	76900	103000	53800
Magnesium	<8 mg/kg	TM224		3980	8690	5450	7580	14600	4930
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243			0.162 M	0.141 M		0.326 M	

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	2.00 - 2.00	0.30 - 0.30	0.70 - 0.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564531	17564536	17564540	17564544	17564552	17564556
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.1	5.7	16	9.8	3.9	6.9
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 #	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 M	0.0215 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 #	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132			0.628		0.199	0.197	
Sulphate, Total potential	<0.06 %	TM132			1.88		0.597	0.591	
Soil Organic Matter (SOM)	<0.35 %	TM132		3.67 #	0.655 #	2.95 #	12.2 #	2.45 #	2.43 #
pH	1 pH Units	TM133		10.6 M	10.9 M	11.1 #	10.8 M	11.8 M	11.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 #	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		14.7 M	6.12 M	10.2 #	35.9 M	9.39 M	15.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 #	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		174 M	204 M	108 #	219 M	581 M	170 M
Copper	<1.4 mg/kg	TM181		17.9 M	<14 M	<14 #	20.4 M	<14 M	<14 M
Iron	<1000 mg/kg	TM181		153000 #	83900 #	114000 #	281000 #	187000 #	296000 #
Lead	<0.7 mg/kg	TM181		63.7 M	8.37 M	61.4 #	93.3 M	15.9 M	23.7 M
Manganese	<0.13 mg/kg	TM181		11400 M	17800 M	13700 #	18400 M	23700 M	11200 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 #	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		41.8 M	6.1 M	16.8 #	40.9 M	8.34 M	14.6 M
Selenium	<1 mg/kg	TM181		<10 #	13.6 #	<10 #	11.7 #	15.5 #	<10 #
Vanadium	<0.2 mg/kg	TM181		196 #	201 #	192 #	279 #	436 #	192 #
Zinc	<1.9 mg/kg	TM181		180 M	31.6 M	177 #	254 M	44.3 M	55.5 M
Sulphate, acid soluble (total)	<0.02 %	TM221			1.81		0.213	0.419	
Calcium	<21 mg/kg	TM224		148000	225000	189000	131000	199000	87400
Magnesium	<8 mg/kg	TM224		12700	26700	23100	7410	15600	6970
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243			0.049 M		0.0974 M	0.028 M	

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7
			Depth (m)	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.70 - 1.70	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564560	17564567	17564590	17564594	17564598	17564602
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	9.9	5.1	8.3	9.9	10
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132		0.0942			0.201		0.161
Sulphate, Total potential	<0.06 %	TM132		0.283			0.603		0.483
Soil Organic Matter (SOM)	<0.35 %	TM132		0.471 #	0.543 #	1.07 #	0.352 #	1.78 #	1.84 #
pH	1 pH Units	TM133		8.77 M	9 M	12.7 M	12.3 M	11.4 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		125 M	92.3 M	10.1 M	15.3 M	22 M	12.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		388 M	217 M	498 M	261 M	42.2 M	264 M
Copper	<1.4 mg/kg	TM181		<14 M	<14 M	<14 M	14.1 M	29.9 M	15.8 M
Iron	<1000 mg/kg	TM181		265000 #	197000 #	212000 #	244000 #	183000 #	138000 #
Lead	<0.7 mg/kg	TM181		23.6 M	37.1 M	25.7 M	39 M	45.2 M	29.9 M
Manganese	<0.13 mg/kg	TM181		11700 M	4560 M	24200 M	24300 M	8580 M	23100 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		119 M	92.2 M	14.3 M	18.3 M	28.9 M	20.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	15.6 #	15.1 #	<10 #	14.9 #
Vanadium	<0.2 mg/kg	TM181		639 #	436 #	654 #	742 #	130 #	449 #
Zinc	<1.9 mg/kg	TM181		246 M	193 M	138 M	94.4 M	122 M	65.3 M
Sulphate, acid soluble (total)	<0.02 %	TM221		0.0788			0.281		0.207
Calcium	<21 mg/kg	TM224		188000	174000	170000	168000	68800	166000
Magnesium	<8 mg/kg	TM224		5410	10400	26500	16600	11700	10300
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243		0.106 M			0.0144 M		0.0526 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V	TP3BF2-V	TP3BF3-V
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	3.10 - 3.10	2.70 - 2.70	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564612	17564616	17564620	17564663	17564474	17564496
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.5	8.6	12	34	31	26
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	37.5 M	376 M	341 M	311 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Sulphur, Total	<0.02 %	TM132		0.404		0.0731			
Sulphate, Total potential	<0.06 %	TM132		1.21		0.219			
Soil Organic Matter (SOM)	<0.35 %	TM132		0.988 #	2.02 #	1.38 #	5.31 #	4.41 #	1.33 #
pH	1 pH Units	TM133		11.3 M	10.8 M	7.72 M	7.5 M	7.65 M	7.83 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M		<1 M
Arsenic	<0.6 mg/kg	TM181		17 M	11.8 M	12.4 M	14.3 M	12.1 M	10.2 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	0.275 M	0.156 M	0.38 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		168 M	55.4 M	24.9 M	38.9 M	26.9 M	34.2 M
Copper	<1.4 mg/kg	TM181		<14 M	18.6 M	21.5 M	18 M	<14 M	13.4 M
Iron	<1000 mg/kg	TM181		126000 #	99600 #	47800 #	28700 #		39000 #
Lead	<0.7 mg/kg	TM181		24.4 M	30.2 M	58.9 M	38.8 M	29.9 M	27.4 M
Manganese	<0.13 mg/kg	TM181		10400 M	6760 M	2240 M	437 M		746 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<0.14 M	<1.4 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		22.6 M	13.9 M	40.4 M	27.3 M	23.9 M	40.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	1.03 #	<10 #	<1 #
Vanadium	<0.2 mg/kg	TM181		230 #	125 #	40.3 #	74 #	45.3 #	63.1 #
Zinc	<1.9 mg/kg	TM181		77.7 M	105 M	157 M	137 M	90.7 M	125 M
Sulphate, acid soluble (total)	<0.02 %	TM221		1.16		0.0732			
Calcium	<21 mg/kg	TM224		174000	178000	33300		5870	
Magnesium	<8 mg/kg	TM224		35400	33000	10900		7930	
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004 g/l	TM243		0.211 M		0.0712 M			

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V		
			Depth (m)	2.70 - 2.70	2.40 - 2.40	2.70 - 2.70	2.00 - 2.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018		
			Sample Time	00:00	00:00	00:00	00:00		
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018		
			SDG Ref	180516-60	180516-60	180516-60	180516-60		
			Lab Sample No.(s)	17564521	17564548	17564608	17564630		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		29	24	22	29		
Exchangeable Ammonia as N	<12 mg/kg	TM024		172 M	119 M	178 M	290 M		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M		
Soil Organic Matter (SOM)	<0.35 %	TM132		2.84 #	1.16 #	2.24 #	4.14 #		
pH	1 pH Units	TM133		7.55 M	7.96 M	7.37 M	7.3 M		
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M		
Arsenic	<0.6 mg/kg	TM181		14.6 M	13.7 M	12.1 M	12.3 M		
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.02 M	0.143 M		
Chromium	<0.9 mg/kg	TM181		32.4 M	28.8 M	31.9 M	34.7 M		
Copper	<1.4 mg/kg	TM181		20.3 M	12.1 M	12.8 M	15.7 M		
Iron	<1000 mg/kg	TM181		41000 #	36300 #	33700 #	30400 #		
Lead	<0.7 mg/kg	TM181		33.8 M	27.6 M	26.3 M	31.1 M		
Manganese	<0.13 mg/kg	TM181		777 M	955 M	391 M	243 M		
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<0.14 M	<0.14 M		
Nickel	<0.2 mg/kg	TM181		38.3 M	41.6 M	35 M	26.9 M		
Selenium	<1 mg/kg	TM181		<1 #	<1 #	<1 #	<1 #		
Vanadium	<0.2 mg/kg	TM181		63.4 #	59.5 #	61.2 #	60.9 #		
Zinc	<1.9 mg/kg	TM181		146 M	118 M	105 M	122 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564571	17564581	17564585	17564647	17564651	17564658
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.8	97.8	107	103	104	104
Acenaphthene-d10 % recovery**	%	TM218		107	106	104	104	101	102
Phenanthrene-d10 % recovery**	%	TM218		110	110	103	104	100	100
Chrysene-d12 % recovery**	%	TM218		96.7	96.4	88.3	91.7	92.3	100
Perylene-d12 % recovery**	%	TM218		90.9	89.5	82.5	97.2	92.3	105
Naphthalene	<0.009 mg/kg	TM218		0.151 M	0.181 M	0.0487 M	0.079 M	0.0359 M	0.0676 M
Acenaphthylene	<0.012 mg/kg	TM218		0.0327 M	0.0522 M	<0.012 M	0.0311 M	<0.012 M	0.0165 M
Acenaphthene	<0.008 mg/kg	TM218		0.0285 M	0.0187 M	0.0113 M	0.0176 M	0.0242 M	0.0326 M
Fluorene	<0.01 mg/kg	TM218		0.0462 M	0.0614 M	0.0203 M	0.0407 M	0.0235 M	0.0195 M
Phenanthrene	<0.015 mg/kg	TM218		0.45 M	0.53 M	0.137 M	0.306 M	0.689 M	0.667 M
Anthracene	<0.016 mg/kg	TM218		0.104 M	0.103 M	0.036 M	0.0673 M	0.159 M	0.0899 M
Fluoranthene	<0.017 mg/kg	TM218		0.736 M	0.651 M	0.146 M	0.535 M	1.04 M	1.59 M
Pyrene	<0.015 mg/kg	TM218		0.531 M	0.454 M	0.118 M	0.427 M	0.835 M	1.31 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.321 M	0.24 M	0.0535 M	0.29 M	0.377 M	0.692 M
Chrysene	<0.01 mg/kg	TM218		0.43 M	0.301 M	0.0529 M	0.344 M	0.42 M	0.751 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.567 M	0.394 M	0.0738 M	0.573 M	0.576 M	0.953 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.207 M	0.133 M	0.0248 M	0.182 M	0.186 M	0.402 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.28 M	0.218 M	0.0408 M	0.319 M	0.274 M	0.649 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.236 M	0.173 M	0.0246 M	0.328 M	0.188 M	0.448 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.0452 M	0.0332 M	<0.023 M	0.0678 M	0.0624 M	0.132 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.226 M	0.169 M	0.0325 M	0.31 M	0.227 M	0.568 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		4.39	3.71	0.819	3.92	5.12	8.39

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1	TP3BF1	TP3BF1
			Depth (m)	1.00 - 1.00	2.00 - 2.00	2.20 - 2.20	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564634	17564639	17564643	17564468	17564526	17564575
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		106	98	103	103	94.1	95.5
Acenaphthene-d10 % recovery**	%	TM218		104	95.1	99.7	101	97.5	97.9
Phenanthrene-d10 % recovery**	%	TM218		108	92.2	104	101	98.6	102
Chrysene-d12 % recovery**	%	TM218		111	83.8	101	90.7	110	122
Perylene-d12 % recovery**	%	TM218		112	82.5	103	91.1	119	131
Naphthalene	<0.009 mg/kg	TM218		0.15 M	0.0906 M	<0.009 M	2 M	2.34 M	37.4 M
Acenaphthylene	<0.012 mg/kg	TM218		0.0333 M	<0.012 M	<0.012 M	1.5 M	1.62 M	51.8 M
Acenaphthene	<0.008 mg/kg	TM218		0.0422 M	0.0217 M	<0.008 M	1.9 M	0.87 M	3.31 M
Fluorene	<0.01 mg/kg	TM218		0.033 M	<0.01 M	<0.01 M	2.98 M	3.55 M	39 M
Phenanthrene	<0.015 mg/kg	TM218		0.397 M	0.18 M	<0.015 M	27.4 M	35.7 M	275 M
Anthracene	<0.016 mg/kg	TM218		0.0884 M	0.0234 M	<0.016 M	5.7 M	6.69 M	51.3 M
Fluoranthene	<0.017 mg/kg	TM218		0.6 M	0.253 M	<0.017 M	32.9 M	38.5 M	269 M
Pyrene	<0.015 mg/kg	TM218		0.504 M	0.194 M	<0.015 M	23.9 M	26.4 M	195 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.319 M	0.0971 M	<0.014 M	10.2 M	13.5 M	57.6 M
Chrysene	<0.01 mg/kg	TM218		0.352 M	0.107 M	<0.01 M	8.46 M	12.4 M	56.9 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.566 M	0.115 M	<0.015 M	13.3 M	14.4 M	66 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.194 M	0.0524 M	<0.014 M	4.15 M	6.22 M	26.9 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.341 M	0.0881 M	<0.015 M	9.15 M	13 M	56.9 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.218 M	0.0608 M	<0.018 M	5.42 M	7.03 M	38 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.0629 M	<0.023 M	<0.023 M	1.46 M	1.93 M	10.2 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.261 M	0.0855 M	<0.024 M	6.59 M	8.4 M	48.1 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		4.16	1.37	<0.118	157	192	1280

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3
			Depth (m)	3.00 - 3.00	0.50 - 0.50	1.00 - 1.00	1.80 - 1.80	2.30 - 2.30	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564625	17564670	17564675	17564682	17564689	17564478
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91	90.6	95.7	93.6	90.2	95
Acenaphthene-d10 % recovery**	%	TM218		94.2	98.7	105	103	94.1	92.1
Phenanthrene-d10 % recovery**	%	TM218		94.8	104	110	108	94.7	90.2
Chrysene-d12 % recovery**	%	TM218		107	84.2	97.8	92.7	102	90.3
Perylene-d12 % recovery**	%	TM218		108	78.5	87.1	86.8	104	87
Naphthalene	<0.009 mg/kg	TM218		5.23 M	4.05 M	0.593 M	0.721 M	0.403 M	1.37 M
Acenaphthylene	<0.012 mg/kg	TM218		4.1 M	2.98 M	0.204 M	0.122 M	0.0776 M	0.416 M
Acenaphthene	<0.008 mg/kg	TM218		0.192 M	0.154 M	0.0473 M	0.168 M	0.157 M	0.0434 M
Fluorene	<0.01 mg/kg	TM218		2.82 M	1.94 M	0.127 M	0.129 M	0.0991 M	0.316 M
Phenanthrene	<0.015 mg/kg	TM218		19.7 M	14.4 M	1.09 M	1.39 M	1.34 M	2.04 M
Anthracene	<0.016 mg/kg	TM218		2.42 M	5.06 M	0.315 M	0.362 M	0.315 M	0.5 M
Fluoranthene	<0.017 mg/kg	TM218		18.4 M	32.7 M	2.16 M	2.98 M	3.26 M	2.86 M
Pyrene	<0.015 mg/kg	TM218		13.6 M	24.8 M	1.76 M	2.89 M	3.22 M	2.04 M
Benz(a)anthracene	<0.014 mg/kg	TM218		5.26 M	11.5 M	0.989 M	1.9 M	2.53 M	1.27 M
Chrysene	<0.01 mg/kg	TM218		4.27 M	10.2 M	1.05 M	2.02 M	2.42 M	1.04 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		6.61 M	16 M	1.46 M	3.07 M	3.24 M	1.51 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		2.58 M	6.2 M	0.569 M	1.24 M	1.59 M	0.601 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		5.49 M	9.89 M	1.02 M	2.38 M	3.31 M	1.09 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		3.59 M	6.61 M	0.706 M	1.51 M	1.71 M	0.673 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.894 M	1.54 M	0.128 M	0.266 M	0.491 M	0.218 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		4.54 M	6 M	0.689 M	1.52 M	2.12 M	0.797 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		99.6	154	12.9	22.7	26.3	16.8

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF3	TP3BF3	TP3BF4	TP3BF4	TP3BF4	TP3BF4
			Depth (m)	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00	2.50 - 2.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564485	17564492	17564500	17564504	17564509	17564513
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.6	95.9	90.9	105	89.9	89.8
Acenaphthene-d10 % recovery**	%	TM218		105	104	99.7	103	87.1	90.4
Phenanthrene-d10 % recovery**	%	TM218		108	110	102	107	88.3	79.5
Chrysene-d12 % recovery**	%	TM218		89.3	93.5	107	108	79.8	42
Perylene-d12 % recovery**	%	TM218		75.2	83.2	101	110	70.1	23.1
Naphthalene	<0.009 mg/kg	TM218		2.88 M	1.08 M	1.21 M	6.57 M	0.434 M	0.308 M
Acenaphthylene	<0.012 mg/kg	TM218		0.719 M	0.176 M	0.487 M	2.58 M	0.117 M	0.0298 M
Acenaphthene	<0.008 mg/kg	TM218		0.0906 M	0.0532 M	0.0419 M	0.141 M	0.0416 M	0.0405 M
Fluorene	<0.01 mg/kg	TM218		0.628 M	0.149 M	0.335 M	1.36 M	0.159 M	0.156 M
Phenanthrene	<0.015 mg/kg	TM218		3.39 M	0.772 M	2.25 M	9.64 M	1.65 M	0.738 M
Anthracene	<0.016 mg/kg	TM218		0.894 M	0.174 M	1.11 M	3.45 M	0.425 M	0.212 M
Fluoranthene	<0.017 mg/kg	TM218		3.99 M	0.963 M	6.06 M	22.5 M	2.78 M	0.627 M
Pyrene	<0.015 mg/kg	TM218		2.76 M	0.772 M	4.38 M	16.3 M	2.2 M	0.762 M
Benz(a)anthracene	<0.014 mg/kg	TM218		1.55 M	0.39 M	2.78 M	10.1 M	1.32 M	0.142 M
Chrysene	<0.01 mg/kg	TM218		1.58 M	0.448 M	2.26 M	9.64 M	1.26 M	0.127 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		2.13 M	0.548 M	3.17 M	14.7 M	1.57 M	0.173 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.768 M	0.193 M	1.3 M	5.53 M	0.483 M	0.0548 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		1.28 M	0.359 M	2.6 M	9.61 M	0.952 M	0.0989 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.944 M	0.243 M	1.68 M	6.27 M	0.744 M	0.046 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.222 M	0.0454 M	0.522 M	1.96 M	0.135 M	<0.023 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.871 M	0.241 M	2 M	7.18 M	0.541 M	0.0695 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		24.7	6.61	32.2	128	14.8	3.58

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	2.00 - 2.00	0.30 - 0.30	0.70 - 0.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564531	17564536	17564540	17564544	17564552	17564556
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.8	98.9	155	110	93.8	97
Acenaphthene-d10 % recovery**	%	TM218		106	110	164	113	104	108
Phenanthrene-d10 % recovery**	%	TM218		109	113	171	111	107	109
Chrysene-d12 % recovery**	%	TM218		94.7	99.4	158	96.6	90.7	95.6
Perylene-d12 % recovery**	%	TM218		86.2	92.7	144	78.5	82.8	90.2
Naphthalene	<0.009 mg/kg	TM218		0.344 M	0.098 M	1.29 #	0.328 M	0.151 M	0.332 M
Acenaphthylene	<0.012 mg/kg	TM218		0.12 M	0.029 M	0.629 #	0.0884 M	0.0417 M	0.0668 M
Acenaphthene	<0.008 mg/kg	TM218		0.0359 M	<0.008 M	0.125 #	<0.04 M	0.0541 M	0.154 M
Fluorene	<0.01 mg/kg	TM218		0.0824 M	0.0303 M	0.675 #	0.0684 M	0.0502 M	0.135 M
Phenanthrene	<0.015 mg/kg	TM218		0.613 M	0.142 M	3.51 #	0.479 M	0.667 M	1.33 M
Anthracene	<0.016 mg/kg	TM218		0.2 M	0.0381 M	0.965 #	0.145 M	0.135 M	0.259 M
Fluoranthene	<0.017 mg/kg	TM218		1.09 M	0.236 M	4.38 #	0.73 M	1.14 M	1.79 M
Pyrene	<0.015 mg/kg	TM218		0.899 M	0.19 M	3.15 #	0.598 M	1 M	1.58 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.543 M	0.105 M	1.62 #	0.336 M	0.554 M	0.998 M
Chrysene	<0.01 mg/kg	TM218		0.64 M	0.115 M	1.73 #	0.438 M	0.701 M	1.17 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.943 M	0.178 M	2.17 #	0.59 M	0.815 M	1.3 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.296 M	0.0598 M	0.8 #	0.207 M	0.268 M	0.544 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.601 M	0.102 M	1.46 #	0.319 M	0.515 M	0.928 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.462 M	0.0854 M	1.03 #	0.241 M	0.354 M	0.594 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		0.0959 M	<0.023 M	0.213 #	<0.115 M	0.0861 M	0.121 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.468 M	0.0835 M	1.02 #	0.254 M	0.368 M	0.611 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		7.43	1.49	24.8	4.82	6.91	11.9

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7
			Depth (m)	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.70 - 1.70	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564560	17564567	17564590	17564594	17564598	17564602
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.6	108	95.4	94.6	106	107
Acenaphthene-d10 % recovery**	%	TM218		97	108	103	103	103	105
Phenanthrene-d10 % recovery**	%	TM218		95.1	106	107	108	101	102
Chrysene-d12 % recovery**	%	TM218		109	106	97.9	98.6	86.4	87.9
Perylene-d12 % recovery**	%	TM218		112	112	88.3	88	83.6	84.5
Naphthalene	<0.009 mg/kg	TM218		<0.009 M	0.014 M	0.109 M	0.167 M	0.0483 M	0.0383 M
Acenaphthylene	<0.012 mg/kg	TM218		<0.012 M	<0.012 M	0.0231 M	0.0158 M	<0.012 M	<0.012 M
Acenaphthene	<0.008 mg/kg	TM218		<0.008 M	<0.008 M	0.0312 M	0.0396 M	<0.008 M	<0.008 M
Fluorene	<0.01 mg/kg	TM218		<0.01 M	<0.01 M	0.0388 M	0.0341 M	<0.01 M	<0.01 M
Phenanthrene	<0.015 mg/kg	TM218		0.0238 M	0.0456 M	0.465 M	0.422 M	0.122 M	0.0828 M
Anthracene	<0.016 mg/kg	TM218		<0.016 M	<0.016 M	0.0921 M	0.097 M	0.0252 M	0.022 M
Fluoranthene	<0.017 mg/kg	TM218		0.0273 M	0.0761 M	0.967 M	0.866 M	0.185 M	0.118 M
Pyrene	<0.015 mg/kg	TM218		0.0265 M	0.0676 M	0.827 M	0.785 M	0.166 M	0.0943 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.0168 M	0.0461 M	0.503 M	0.474 M	0.0965 M	0.0491 M
Chrysene	<0.01 mg/kg	TM218		0.0171 M	0.0415 M	0.622 M	0.583 M	0.1 M	0.0641 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.0194 M	0.0546 M	0.928 M	0.833 M	0.175 M	0.0967 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.014 M	0.0206 M	0.392 M	0.334 M	0.0558 M	0.0308 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		<0.015 M	0.0401 M	0.549 M	0.494 M	0.0996 M	0.0456 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.018 M	0.0234 M	0.438 M	0.404 M	0.0652 M	0.0336 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023 M	<0.023 M	0.0761 M	0.0649 M	<0.023 M	<0.023 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<0.024 M	0.0342 M	0.453 M	0.416 M	0.0827 M	0.046 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		0.131	0.464	6.51	6.03	1.22	0.721

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V	TP3BF2-V	TP3BF3-V
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	3.10 - 3.10	2.70 - 2.70	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564612	17564616	17564620	17564663	17564474	17564496
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		103	103	102	103	93.4	85.8
Acenaphthene-d10 % recovery**	%	TM218		98.2	101	101	102	98	91.2
Phenanthrene-d10 % recovery**	%	TM218		95.8	97.6	99.1	102	99.1	97.7
Chrysene-d12 % recovery**	%	TM218		90.4	83	93.7	89.5	105	91.6
Perylene-d12 % recovery**	%	TM218		86.9	79.6	95.9	88.3	105	84.7
Naphthalene	<0.009 mg/kg	TM218		0.0329 M	0.0514 M	0.012 M	<0.009 M	<0.009 M	0.0209 M
Acenaphthylene	<0.012 mg/kg	TM218		<0.012 M	0.0136 M	<0.012 M	<0.012 M	<0.012 M	<0.012 M
Acenaphthene	<0.008 mg/kg	TM218		0.0154 M	0.0136 M	<0.008 M	<0.008 M	<0.008 M	<0.008 M
Fluorene	<0.01 mg/kg	TM218		<0.01 M	0.0138 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Phenanthrene	<0.015 mg/kg	TM218		0.104 M	0.129 M	0.0687 M	<0.015 M	<0.015 M	<0.015 M
Anthracene	<0.016 mg/kg	TM218		0.0193 M	0.0329 M	<0.016 M	<0.016 M	<0.016 M	<0.016 M
Fluoranthene	<0.017 mg/kg	TM218		0.161 M	0.172 M	0.0772 M	<0.017 M	<0.017 M	0.0265 M
Pyrene	<0.015 mg/kg	TM218		0.146 M	0.151 M	0.0622 M	<0.015 M	<0.015 M	<0.015 M
Benz(a)anthracene	<0.014 mg/kg	TM218		0.084 M	0.0955 M	0.0358 M	<0.014 M	<0.014 M	<0.014 M
Chrysene	<0.01 mg/kg	TM218		0.0924 M	0.086 M	0.0403 M	<0.01 M	<0.01 M	<0.01 M
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		0.134 M	0.154 M	0.0516 M	<0.015 M	<0.015 M	<0.015 M
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		0.0543 M	0.0509 M	0.0193 M	<0.014 M	<0.014 M	<0.014 M
Benzo(a)pyrene	<0.015 mg/kg	TM218		0.0916 M	0.0856 M	0.0348 M	<0.015 M	<0.015 M	<0.015 M
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		0.0678 M	0.0589 M	0.0211 M	<0.018 M	<0.018 M	<0.018 M
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023 M	<0.023 M	<0.023 M	<0.023 M	<0.023 M	<0.023 M
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		0.104 M	0.0787 M	0.0278 M	<0.024 M	<0.024 M	<0.024 M
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		1.11	1.19	0.451	<0.118	<0.118	<0.118

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V		
			Depth (m)	2.70 - 2.70	2.40 - 2.40	2.70 - 2.70	2.00 - 2.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018		
			Sample Time	00:00	00:00	00:00	00:00		
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018		
			SDG Ref	180516-60	180516-60	180516-60	180516-60		
			Lab Sample No.(s)	17564521	17564548	17564608	17564630		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.2	94.6	89.7	86.3		
Acenaphthene-d10 % recovery**	%	TM218		89.5	94.1	94	89.4		
Phenanthrene-d10 % recovery**	%	TM218		100	96.1	93.6	92.9		
Chrysene-d12 % recovery**	%	TM218		93	98.8	99.3	92.1		
Perylene-d12 % recovery**	%	TM218		84.6	87.8	98.2	83		
Naphthalene	<0.009 mg/kg	TM218		0.284 M	<0.009 M	<0.009 M	<0.009 M		
Acenaphthylene	<0.012 mg/kg	TM218		<0.012 M	<0.012 M	<0.012 M	<0.012 M		
Acenaphthene	<0.008 mg/kg	TM218		<0.008 M	<0.008 M	<0.008 M	<0.008 M		
Fluorene	<0.01 mg/kg	TM218		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Phenanthrene	<0.015 mg/kg	TM218		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Anthracene	<0.016 mg/kg	TM218		<0.016 M	<0.016 M	<0.016 M	<0.016 M		
Fluoranthene	<0.017 mg/kg	TM218		<0.017 M	<0.017 M	<0.017 M	<0.017 M		
Pyrene	<0.015 mg/kg	TM218		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Benz(a)anthracene	<0.014 mg/kg	TM218		<0.014 M	<0.014 M	<0.014 M	<0.014 M		
Chrysene	<0.01 mg/kg	TM218		<0.01 M	<0.01 M	<0.01 M	<0.01 M		
Benzo(b)fluoranthene	<0.015 mg/kg	TM218		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Benzo(k)fluoranthene	<0.014 mg/kg	TM218		<0.014 M	<0.014 M	<0.014 M	<0.014 M		
Benzo(a)pyrene	<0.015 mg/kg	TM218		<0.015 M	<0.015 M	<0.015 M	<0.015 M		
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218		<0.018 M	<0.018 M	<0.018 M	<0.018 M		
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218		<0.023 M	<0.023 M	<0.023 M	<0.023 M		
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218		<0.024 M	<0.024 M	<0.024 M	<0.024 M		
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218		0.284	<0.118	<0.118	<0.118		

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564571	17564581	17564585	17564647	17564651	17564658
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		101	97	97	109	107	105
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		<0.176	<0.176	0.265	<0.176	<0.176	<0.176
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		<0.04	<0.04	0.134	<0.04	<0.04	<0.04
Aliphatics >C12-C16	<0.1 mg/kg	TM173		1.98	2.31	27.7	0.827	3.37	7.43
Aliphatics >C16-C21	<0.1 mg/kg	TM173		10.4	11.1	37.2	5.04	18.6	31.8
Aliphatics >C21-C35	<0.1 mg/kg	TM173		71.3	74.9	60.5	64.8	145	167
Aliphatics >C35-C44	<0.1 mg/kg	TM173		23	18.5	7.22	5.02	24.2	45.7
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		107	107	133	75.6	191	252
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	0.0899	<0.04	<0.04	<0.04
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		0.679	1.09	2.65	<0.1	0.308	1.97
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		5.93	5.91	8.02	1.86	6.58	15.8
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		33	30.5	17.5	15.5	39.7	71.9
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		17.3	12.6	4.26	4.64	14.2	30.8
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		6.97	4.71	1.42	1.47	5.36	12.9
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		56.9	50	32.5	22	60.8	121
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		164	157	165	97.6	251	372

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1	TP3BF1	TP3BF1
			Depth (m)	1.00 - 1.00	2.00 - 2.00	2.20 - 2.20	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564634	17564639	17564643	17564468	17564526	17564575
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		89	98	103	36	49	98
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		<0.176	<0.176	<0.176	0.575	0.259	0.241
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	0.0511	0.0407	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	0.11	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	0.165	0.0682	0.092
Aliphatics >C12-C16	<0.1 mg/kg	TM173		1.19	1.16	<0.1	20.7	14.3	5.65
Aliphatics >C16-C21	<0.1 mg/kg	TM173		10.1	5.62	<0.1	86.7	49.1	27.2
Aliphatics >C21-C35	<0.1 mg/kg	TM173		83.4	36.6	<0.1	356	802	164
Aliphatics >C35-C44	<0.1 mg/kg	TM173		33.6	15.4	<0.1	371	913	172
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		128	58.9	<0.1	835	1780	369
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	0.0888	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	0.11	0.0451	0.0614
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		1.4	0.924	<0.1	20.1	17.1	7.28
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		6.69	4.19	<0.1	115	93.9	49.9
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		41.2	22	3.3	776	1810	411
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		30.2	17.9	0.916	602	1580	321
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		12.7	7.65	<0.1	260	724	142
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		79.5	45	4.22	1510	3500	789
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		208	104	4.22	2350	5280	1160

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3
			Depth (m)	3.00 - 3.00	0.50 - 0.50	1.00 - 1.00	1.80 - 1.80	2.30 - 2.30	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564625	17564670	17564675	17564682	17564689	17564478
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		12	52	91	119	23
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089	1.14	<0.176	<0.176	<0.176	0.472	<0.176
Aliphatics >C5-C6	<0.01 mg/kg	TM089	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089	<0.04	<0.04	<0.04	<0.04	0.046	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089	0.0449	<0.04	<0.04	<0.04	0.092	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089	0.606	<0.04	<0.04	0.0552	0.147	<0.04
Aliphatics >C12-C16	<0.1 mg/kg	TM173	1.26	11.6	<0.1	3.56	5	2.29
Aliphatics >C16-C21	<0.1 mg/kg	TM173	3.17	17.5	2.88	15.6	15.6	6.27
Aliphatics >C21-C35	<0.1 mg/kg	TM173	16.6	40.2	17.6	114	126	29.6
Aliphatics >C35-C44	<0.1 mg/kg	TM173	8.4	7.62	2.11	58.5	68.9	3.43
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173	29.5	76.9	22.6	191	216	41.6
Aromatics >EC5-EC7	<0.01 mg/kg	TM089	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089	<0.04	<0.04	<0.04	<0.04	0.0667	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089	0.405	<0.04	<0.04	<0.04	0.0978	<0.04
Aromatics >EC12-EC16	<0.1 mg/kg	TM173	1.25	26	1.17	2.53	2.37	2.74
Aromatics >EC16-EC21	<0.1 mg/kg	TM173	8.71	213	8.69	20.3	25.7	10
Aromatics >EC21-EC35	<0.1 mg/kg	TM173	36.4	453	35.8	110	146	33.4
Aromatics >EC35-EC44	<0.1 mg/kg	TM173	16.2	92.5	12.1	46.2	52.7	11.3
Aromatics >EC40-EC44	<0.1 mg/kg	TM173	6.71	21.4	3.97	16.4	16.8	3.73
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173	62.6	785	57.7	179	227	57.5
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173	93.1	862	80.3	370	443	99.1

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF3	TP3BF3	TP3BF4	TP3BF4	TP3BF4	TP3BF4
			Depth (m)	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00	2.50 - 2.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564485	17564492	17564500	17564504	17564509	17564513
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		13	27	54	18	66	96
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		0.466	<0.176	<0.176	<0.176	<0.176	<0.176
Aliphatics >C5-C6	<0.01 mg/kg	TM089		0.0404	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		0.103	<0.04	<0.04	0.0599	<0.04	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089		0.0818	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		0.0499	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C12-C16	<0.1 mg/kg	TM173		20.4	0.743	2.92	4.83	2.64	<0.1
Aliphatics >C16-C21	<0.1 mg/kg	TM173		55.7	2.7	18.8	28.4	19.3	8.39
Aliphatics >C21-C35	<0.1 mg/kg	TM173		90.4	14.9	89	62.7	44.4	28.5
Aliphatics >C35-C44	<0.1 mg/kg	TM173		11.5	1.41	32.3	9.53	7.13	1.93
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		178	19.8	143	106	73.5	38.8
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	0.043	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		0.0977	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		41.4	1.34	4.2	20.8	3.3	<0.1
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		116	5.13	27.5	130	26.4	6.62
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		220	16.9	85.7	320	53.4	13.4
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		52.8	5.31	28.3	80	10.1	0.963
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		16.1	1.56	9.22	22.4	3.31	<0.1
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		430	28.7	146	551	93.2	21
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		608	48.5	289	657	167	59.8

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	2.00 - 2.00	0.30 - 0.30	0.70 - 0.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564531	17564536	17564540	17564544	17564552	17564556
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74	93	77	81	76	101
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		<0.176	<0.176	<0.176	<0.176	<0.176	0.252
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	0.0827
Aliphatics >C12-C16	<0.1 mg/kg	TM173		1.51	<0.1	0.521	1.1	1.23	2.08
Aliphatics >C16-C21	<0.1 mg/kg	TM173		10.9	1.45	9.52	16.6	6.37	8.88
Aliphatics >C21-C35	<0.1 mg/kg	TM173		138	11.5	42.6	79.8	47.4	71.3
Aliphatics >C35-C44	<0.1 mg/kg	TM173		48.4	2.97	11.9	24.4	13.3	13.7
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		199	15.9	64.5	122	68.3	95.9
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	0.0548
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		1.8	<0.1	1.26	1.16	0.942	2.13
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		15.8	1.42	10	11.7	8.26	13.6
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		85.6	4.39	31.1	41.2	38.6	59.1
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		54.6	1.04	12.4	23.5	11.7	15
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		21.6	<0.1	4.13	9.54	3.98	5.72
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		158	6.86	54.8	77.6	59.5	89.9
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		357	22.8	119	199	128	186

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7
			Depth (m)	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.70 - 1.70	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564560	17564567	17564590	17564594	17564598	17564602
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		114	105	86	107	91	93
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		0.785	1.8	<0.176	<0.176	<0.176	<0.176
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	0.0522	<0.04	<0.04	<0.04	0.0433
Aliphatics >C8-C10	<0.01 mg/kg	TM089		0.0978	0.118	<0.04	<0.04	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		0.354	0.917	<0.04	<0.04	<0.04	<0.04
Aliphatics >C12-C16	<0.1 mg/kg	TM173		4.15	4.66	1.78	5.74	2.84	2.09
Aliphatics >C16-C21	<0.1 mg/kg	TM173		18.6	13.3	9.13	13	5.37	4.86
Aliphatics >C21-C35	<0.1 mg/kg	TM173		123	78.5	77.3	54.1	19.9	20.4
Aliphatics >C35-C44	<0.1 mg/kg	TM173		11.6	12.3	11.1	7.35	3.66	2.67
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		158	109	99.2	80.2	31.8	30
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		0.0656	0.0844	<0.04	<0.04	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		0.236	0.611	<0.04	<0.04	<0.04	<0.04
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		<0.1	1.33	0.893	0.893	0.966	<0.1
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		5.2	4.56	10.4	5.14	2.51	2.63
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		45.4	29.5	41.4	32.3	10.3	11.9
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		3.97	7.96	13.8	11	3.3	2.14
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		<0.1	2.87	4.96	4.24	1.05	<0.1
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		54.6	43.4	66.5	49.3	17.1	16.7
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		213	154	166	129	48.8	46.7

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V	TP3BF2-V	TP3BF3-V
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	3.10 - 3.10	2.70 - 2.70	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564612	17564616	17564620	17564663	17564474	17564496
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87	69	96	87	121	101
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		<0.176	0.241	<0.176	<0.176	<0.176	<0.176
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	0.0547	<0.04	<0.04	<0.04	<0.04
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.04	0.0449	<0.04	<0.04	<0.04	<0.04
Aliphatics >C10-C12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aliphatics >C12-C16	<0.1 mg/kg	TM173		1.74	2.13	<0.1	<0.1	<0.1	<0.1
Aliphatics >C16-C21	<0.1 mg/kg	TM173		7.63	10.5	2.23	<0.1	<0.1	<0.1
Aliphatics >C21-C35	<0.1 mg/kg	TM173		52.5	66.9	11.4	2.63	5.06	<0.1
Aliphatics >C35-C44	<0.1 mg/kg	TM173		19.4	31.6	2.81	<0.1	<0.1	<0.1
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		81.3	111	16.5	2.63	5.06	<0.1
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.04	0.047	<0.04	<0.04	<0.04	<0.04
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		0.395	<0.1	<0.1	<0.1	<0.1	<0.1
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		3.45	3.01	1.17	<0.1	<0.1	<0.1
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		23.4	28.8	8.83	15.8	17.2	2.82
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		18	33.5	7.61	2.1	1.61	<0.1
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		7.95	16.6	3.26	<0.1	<0.1	<0.1
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		45.2	65.3	17.6	17.9	18.9	2.82
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		126	177	34.1	20.5	23.9	2.82

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V		
			Depth (m)	2.70 - 2.70	2.40 - 2.40	2.70 - 2.70	2.00 - 2.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018		
			Sample Time	00:00	00:00	00:00	00:00		
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018		
			SDG Ref	180516-60	180516-60	180516-60	180516-60		
			Lab Sample No.(s)	17564521	17564548	17564608	17564630		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		106	93	104	102		
GRO TOT (Moisture Corrected)	<0.044 mg/kg	TM089		<0.176	<0.176	<0.176	<0.176		
Aliphatics >C5-C6	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aliphatics >C6-C8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aliphatics >C8-C10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aliphatics >C10-C12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aliphatics >C12-C16	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aliphatics >C16-C21	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aliphatics >C21-C35	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aliphatics >C35-C44	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Total Aliphatics >C12-C44	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aromatics >EC5-EC7	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aromatics >EC7-EC8	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aromatics >EC8-EC10	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aromatics >EC10-EC12	<0.01 mg/kg	TM089		<0.04	<0.04	<0.04	<0.04		
Aromatics >EC12-EC16	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aromatics >EC16-EC21	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Aromatics >EC21-EC35	<0.1 mg/kg	TM173		8	3.17	<0.1	8.84		
Aromatics >EC35-EC44	<0.1 mg/kg	TM173		0.617	0.523	<0.1	1.02		
Aromatics >EC40-EC44	<0.1 mg/kg	TM173		<0.1	<0.1	<0.1	<0.1		
Total Aromatics >EC12-EC44	<0.1 mg/kg	TM173		8.62	3.69	<0.1	9.87		
Total Aliphatics & Aromatics >C5-C44	<0.1 mg/kg	TM173		8.62	3.69	<0.1	9.87		

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564571	17564581	17564585	17564647	17564651	17564658
			AGS Reference						
Dibromofluoromethane**	%	TM116		102	101	120	104	104	104
Toluene-d8**	%	TM116		94.8	96.7	97.5	99.1	97.8	99.1
4-Bromofluorobenzene**	%	TM116		92	97.2	99.3	97.2	99.3	102
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		0.198 M	<0.13 M	<0.13 M	<0.13 M	<0.13 M	<0.13 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1	TP3BF1	TP3BF1
			Depth (m)	1.00 - 1.00	2.00 - 2.00	2.20 - 2.20	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564634	17564639	17564643	17564468	17564526	17564575
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	106	107	107	116	110
Toluene-d8**	%	TM116		98.5	98.6	97.7	93	81.6	95.7
4-Bromofluorobenzene**	%	TM116		94.7	95.7	99.2	86.4	70	89.6
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		<0.13 M	<0.13 M		0.289 M	1.15 M	0.758 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3
			Depth (m)	3.00 - 3.00	0.50 - 0.50	1.00 - 1.00	1.80 - 1.80	2.30 - 2.30	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564625	17564670	17564675	17564682	17564689	17564478
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	103	105	103	102	96.1
Toluene-d8**	%	TM116		97.6	98.6	98.6	98.6	96.1	95.1
4-Bromofluorobenzene**	%	TM116		97.2	94.4	93.7	93.5	95.6	83
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<2 M	<0.1 M	<0.1 M	<0.1 M	<2 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<1.8 M	<0.09 M	<0.09 M	<0.09 M	<1.8 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<1.4 M	<0.07 M	<0.07 M	<0.07 M	<1.4 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.8 M	<0.04 M	<0.04 M	<0.04 M	<0.8 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<2 #	<0.1 #	<0.1 #	<0.1 #	<2 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<2 M	<0.1 M	<0.1 M	<0.1 M	<2 M
Naphthalene	<0.013 mg/kg	TM116		0.591 M	3.26 M	<0.13 M	<0.13 M	<0.13 M	4.82 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<8	<0.4	<0.4	<0.4	<8

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF3	TP3BF3	TP3BF4	TP3BF4	TP3BF4	TP3BF4
			Depth (m)	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00	2.50 - 2.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564485	17564492	17564500	17564504	17564509	17564513
			AGS Reference						
Dibromofluoromethane**	%	TM116		92.4	108	101	91.4	86.6	70.2
Toluene-d8**	%	TM116		93	94.6	95	91.8	94.4	96.4
4-Bromofluorobenzene**	%	TM116		76.3	90.7	86.3	80.5	87.1	88.5
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.2 M	<0.2 M	<0.1 M	<0.2 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.18 M	<0.18 M	<0.09 M	<0.18 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.14 M	<0.14 M	<0.07 M	<0.14 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.08 M	<0.08 M	<0.04 M	<0.08 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.2 #	<0.2 #	<0.1 #	<0.2 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.2 M	<0.2 M	<0.1 M	<0.2 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		0.673 M	0.418 M	0.239 M	0.815 M	<0.13 M	<0.13 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.8	<0.8	<0.4	<0.8	<0.4	<0.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	2.00 - 2.00	0.30 - 0.30	0.70 - 0.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564531	17564536	17564540	17564544	17564552	17564556
			AGS Reference						
Dibromofluoromethane**	%	TM116		103	104	99.4	107	107	104
Toluene-d8**	%	TM116		97.7	99.5	96.5	98.6	98.8	97
4-Bromofluorobenzene**	%	TM116		86.7	94.9	87.8	93.3	91.9	97.3
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 #	<0.1 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 #	<0.09 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 #	<0.07 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 #	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 #	<0.1 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		<0.13 M	<0.13 M	0.338 #	<0.13 M	<0.13 M	<0.13 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7
			Depth (m)	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.70 - 1.70	2.30 - 2.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564560	17564567	17564590	17564594	17564598	17564602
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	104	112	104	115	115
Toluene-d8**	%	TM116		93.1	97.9	97.6	98.9	98.6	98.2
4-Bromofluorobenzene**	%	TM116		96.3	99	96.7	97.8	89.7	95.2
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		<0.13 M	<0.13 M	<0.13 M	<0.13 M	<0.13 M	<0.13 M
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V	TP3BF2-V	TP3BF3-V
			Depth (m)	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	3.10 - 3.10	2.70 - 2.70	2.20 - 2.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018	15/05/2018
			Sample Time	00:00	00:00	00:00	00:00	00:00	00:00
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018	16/05/2018
			SDG Ref	180516-60	180516-60	180516-60	180516-60	180516-60	180516-60
			Lab Sample No.(s)	17564612	17564616	17564620	17564663	17564474	17564496
			AGS Reference						
Dibromofluoromethane**	%	TM116		103	104	109	112	109	108
Toluene-d8**	%	TM116		99.4	98.5	97.4	93.7	96.9	97.1
4-Bromofluorobenzene**	%	TM116		95.4	93.2	91.7	94.1	94.7	95.9
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M	<0.04 M
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #	<0.1 #
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Naphthalene	<0.013 mg/kg	TM116		<0.13 M	<0.13 M	<0.13 M			
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	*m*CERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted test.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V		
			Depth (m)	2.70 - 2.70	2.40 - 2.40	2.70 - 2.70	2.00 - 2.00		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	15/05/2018	15/05/2018	15/05/2018	15/05/2018		
			Sample Time	00:00	00:00	00:00	00:00		
			Date Received	16/05/2018	16/05/2018	16/05/2018	16/05/2018		
			SDG Ref	180516-60	180516-60	180516-60	180516-60		
			Lab Sample No.(s)	17564521	17564548	17564608	17564630		
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	104	109	114		
Toluene-d8**	%	TM116		97.9	98.9	98.5	98.8		
4-Bromofluorobenzene**	%	TM116		100	93.8	95.7	96.5		
Methyl Tertiary Butyl Ether	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M		
Benzene	<0.009 mg/kg	TM116		<0.09 M	<0.09 M	<0.09 M	<0.09 M		
Toluene	<0.007 mg/kg	TM116		<0.07 M	<0.07 M	<0.07 M	<0.07 M		
Ethylbenzene	<0.004 mg/kg	TM116		<0.04 M	<0.04 M	<0.04 M	<0.04 M		
p/m-Xylene	<0.01 mg/kg	TM116		<0.1 #	<0.1 #	<0.1 #	<0.1 #		
o-Xylene	<0.01 mg/kg	TM116		<0.1 M	<0.1 M	<0.1 M	<0.1 M		
Sum of BTEX	<0.04 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4		

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Asbestos Identification - Solid Samples

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE6 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 18:27:24 180516-60 17564571 TM048	22/05/2018	Barbara Urbanek-Walsh	Loose fibres in soil.	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE6 1.50 - 1.50 SOLID 15/05/2018 00:00:00 16/05/2018 18:29:45 180516-60 17564585 TM048	22/05/2018	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE7 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 18:30:30 180516-60 17564647 TM048	21/05/2018	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE7 1.80 - 1.80 SOLID 15/05/2018 00:00:00 16/05/2018 18:27:44 180516-60 17564658 TM048	22/05/2018	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE8 1.00 - 1.00 SOLID 15/05/2018 00:00:00 16/05/2018 19:22:40 180516-60 17564634 TM048	21/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE8 2.00 - 2.00 SOLID 15/05/2018 00:00:00 16/05/2018 19:20:05 180516-60 17564639 TM048	22/05/2018	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 180516-60 **Client Reference:** **Report Number:** 460557
Location: Llanwern **Order Number:** LLA429 **Superseded Report:** 459951

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF1 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 19:30:42 180516-60 17564468 TM048	22/05/2018	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF1 2.00 - 2.00 SOLID 15/05/2018 00:00:00 16/05/2018 20:26:36 180516-60 17564575 TM048	22/05/2018	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF2 1.00 - 1.00 SOLID 15/05/2018 00:00:00 16/05/2018 19:33:24 180516-60 17564675 TM048	22/05/2018	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF2 2.30 - 2.30 SOLID 15/05/2018 00:00:00 16/05/2018 20:24:12 180516-60 17564689 TM048	22/05/2018	Lucy Caroe	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF3 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 19:17:16 180516-60 17564478 TM048	21/05/2018	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF3 2.00 - 2.00 SOLID 15/05/2018 00:00:00 16/05/2018 18:36:50 180516-60 17564492 TM048	21/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 180516-60 **Client Reference:** **Report Number:** 460557
Location: Llanwern **Order Number:** LLA429 **Superseded Report:** 459951

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF4 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 19:34:56 180516-60 17564500 TM048	22/05/2018	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF4 2.00 - 2.00 SOLID 15/05/2018 00:00:00 16/05/2018 19:32:49 180516-60 17564509 TM048	22/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF5 1.00 - 1.00 SOLID 15/05/2018 00:00:00 16/05/2018 20:51:34 180516-60 17564536 TM048	22/05/2018	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF5 2.00 - 2.00 SOLID 15/05/2018 00:00:00 16/05/2018 20:54:22 180516-60 17564544 TM048	22/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF6 0.30 - 0.30 SOLID 15/05/2018 00:00:00 16/05/2018 19:31:08 180516-60 17564552 TM048	22/05/2018	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF6 1.00 - 1.00 SOLID 15/05/2018 00:00:00 16/05/2018 19:35:32 180516-60 17564560 TM048	22/05/2018	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 180516-60 **Client Reference:** **Report Number:** 460557
Location: Llanwern **Order Number:** LLA429 **Superseded Report:** 459951

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF7 1.20 - 1.20 SOLID 15/05/2018 00:00:00 16/05/2018 17:37:17 180516-60 17564594 TM048	22/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF7 2.30 - 2.30 SOLID 15/05/2018 00:00:00 16/05/2018 17:39:52 180516-60 17564602 TM048	22/05/2018	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF8 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 19:05:50 180516-60 17564612 TM048	22/05/2018	Lucy Caroe	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF8 1.50 - 1.50 SOLID 15/05/2018 00:00:00 16/05/2018 19:03:31 180516-60 17564620 TM048	22/05/2018	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Asbestos Quantification - Full

		Additional Asbestos Components (Using TM048)	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM Evaluation - %	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BE6 0.50 - 0.50 SOLID 15/05/2018 00:00:00 16/05/2018 18:27:45 180516-60 17564571 TM304	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP3BF2 2.30 - 2.30 SOLID 15/05/2018 00:00:00 16/05/2018 20:24:47 180516-60 17564689 TM304	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564468
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.000239	<0.00001	0.00239	<0.0001	-	-	-
Arsenic	0.000668	<0.0005	0.00668	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00291	<0.001	0.0291	<0.01	-	-	-
Copper	0.00284	<0.0003	0.0284	<0.003	-	-	-
Lead	0.00326	<0.0002	0.0326	<0.002	-	-	-
Manganese	0.014	<0.003	0.14	<0.03	-	-	-
Nickel	0.000727	<0.0004	0.00727	<0.004	-	-	-
Selenium	0.00272	<0.001	0.0272	<0.01	-	-	-
Vanadium	0.0899	<0.001	0.899	<0.01	-	-	-
Zinc	2.09	<0.001	20.9	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.609	<0.019	6.09	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.00183	<0.00001	0.0183	<0.0001	-	-	-
Acenaphthene by GCMS	0.00285	<0.000005	0.0285	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000904	<0.000005	0.000904	<0.00005	-	-	-
Fluoranthene by GCMS	0.000592	<0.000005	0.00592	<0.00005	-	-	-
Anthracene by GCMS	0.000301	<0.000005	0.00301	<0.00005	-	-	-
Phenanthrene by GCMS	0.00183	<0.000005	0.0183	<0.00005	-	-	-
Fluorene by GCMS	0.000891	<0.000005	0.00891	<0.00005	-	-	-
Chrysene by GCMS	0.00000964	<0.000005	0.0000964	<0.00005	-	-	-
Pyrene by GCMS	0.000586	<0.000005	0.00586	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000131	<0.000005	0.000131	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.00000593	<0.000005	0.0000593	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000495	<0.000002	0.0000495	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.009	<0.000082	0.09	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.56
Conductivity (µS/cm)	839.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564468
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.56
Conductivity (µS/cm)	839.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	8.93
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.8
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564478
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.0024	<0.0005	0.024	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00287	<0.0003	0.0287	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	0.00466	<0.003	0.0466	<0.03	-	-	-
Nickel	0.000507	<0.0004	0.00507	<0.004	-	-	-
Selenium	0.00396	<0.001	0.0396	<0.01	-	-	-
Vanadium	0.0383	<0.001	0.383	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.659	<0.019	6.59	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000254	<0.00001	0.000254	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000124	<0.000005	0.000124	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000144	<0.000005	0.000144	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000109	<0.000005	0.000109	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000495	<0.000002	0.0000495	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	0.00000954	<0.000005	0.0000954	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.35
Conductivity (µS/cm)	584.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	8.93
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.8
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564478
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.35
Conductivity (µS/cm)	584.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	6.16
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564485
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000124	<0.00001	0.000124	<0.0001	-	-	-
Arsenic	0.00231	<0.0005	0.0231	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00172	<0.001	0.0172	<0.01	-	-	-
Copper	0.00493	<0.0003	0.0493	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.0011	<0.0004	0.011	<0.004	-	-	-
Selenium	0.00259	<0.001	0.0259	<0.01	-	-	-
Vanadium	0.0404	<0.001	0.404	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000517	<0.00001	0.000517	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	0.00000715	<0.000005	0.0000715	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000094	<0.000005	0.000094	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.000014	<0.00000595	0.00014	<0.0000595	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000091	<0.000005	0.000091	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.0000913	<0.000082	0.000913	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.25
Conductivity (µS/cm)	499.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.894

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	6.16
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564485
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.25
Conductivity (µS/cm)	499.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.894

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	7.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	93.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564492
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000166	<0.00001	0.000166	<0.0001	-	-	-
Arsenic	0.00154	<0.0005	0.0154	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00117	<0.001	0.0117	<0.01	-	-	-
Copper	0.00394	<0.0003	0.0394	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00104	<0.0004	0.0104	<0.004	-	-	-
Selenium	0.00276	<0.001	0.0276	<0.01	-	-	-
Vanadium	0.056	<0.001	0.56	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000482	<0.00001	0.000482	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	0.00000649	<0.000005	0.0000649	<0.00005	-	-	-
Fluoranthene by GCMS	0.00000871	<0.000005	0.0000871	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.00000893	<0.000005	0.0000893	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00000893	<0.000005	0.0000893	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.34
Conductivity (µS/cm)	566.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.893

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	7.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	93.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564492
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF3
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.34
Conductivity (µS/cm)	566.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.893

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	9.05
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564500
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00492	<0.0005	0.0492	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.0016	<0.0003	0.016	<0.003	-	-	-
Lead	0.00129	<0.0002	0.0129	<0.002	-	-	-
Manganese	0.0047	<0.003	0.047	<0.03	-	-	-
Nickel	0.000445	<0.0004	0.00445	<0.004	-	-	-
Selenium	0.00586	<0.001	0.0586	<0.01	-	-	-
Vanadium	0.0626	<0.001	0.626	<0.01	-	-	-
Zinc	0.11	<0.001	1.1	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.174	<0.019	1.74	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000623	<0.00001	0.000623	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000155	<0.000005	0.000155	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000175	<0.000005	0.000175	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.000019	<0.000005	0.00019	<0.00005	-	-	-
Fluorene by GCMS	0.00000623	<0.000005	0.0000623	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000193	<0.000005	0.000193	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00014	<0.000082	0.0014	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.97
Conductivity (µS/cm)	350.00
Temperature (°C)	19.30
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	9.05
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564500
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	0.0011	<0.001	0.011	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.97
Conductivity (µS/cm)	350.00
Temperature (°C)	19.30
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564504
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00373	<0.0005	0.0373	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.000434	<0.0003	0.00434	<0.003	-	-	-
Lead	0.000335	<0.0002	0.00335	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.0037	<0.001	0.037	<0.01	-	-	-
Vanadium	0.0178	<0.001	0.178	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.348	<0.019	3.48	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000239	<0.00001	0.00239	<0.0001	-	-	-
Acenaphthene by GCMS	0.00000695	<0.000005	0.0000695	<0.00005	-	-	-
Acenaphthylene by GCMS	0.000119	<0.000005	0.00119	<0.00005	-	-	-
Fluoranthene by GCMS	0.000751	<0.000005	0.00751	<0.00005	-	-	-
Anthracene by GCMS	0.0000927	<0.000005	0.000927	<0.00005	-	-	-
Phenanthrene by GCMS	0.000345	<0.000005	0.00345	<0.00005	-	-	-
Fluorene by GCMS	0.0000562	<0.000005	0.000562	<0.00005	-	-	-
Chrysene by GCMS	0.00026	<0.000005	0.0026	<0.00005	-	-	-
Pyrene by GCMS	0.000751	<0.000005	0.00751	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.000301	<0.000005	0.00301	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.000539	<0.000005	0.00539	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.000261	<0.000005	0.00261	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.000302	<0.000002	0.00302	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	0.0000975	<0.000005	0.000975	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	0.000457	<0.000005	0.00457	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	0.000455	<0.000005	0.00455	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00503	<0.000082	0.0503	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	7.44
Conductivity (µS/cm)	98.70
Temperature (°C)	21.20
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564504
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene	<0.01	<0.01	<0.1	<0.1	-	-	-
Ethylbenzene	<0.01	<0.01	<0.1	<0.1	-	-	-
p/m-Xylene	<0.01	<0.01	<0.1	<0.1	-	-	-
o-Xylene	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Xylenes	<0.02	<0.02	<0.2	<0.2	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	7.44
Conductivity (µS/cm)	98.70
Temperature (°C)	21.20
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564509
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.395	<0.2	3.95	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000238	<0.00001	0.000238	<0.0001	-	-	-
Arsenic	0.00285	<0.0005	0.0285	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00211	<0.0003	0.0211	<0.003	-	-	-
Lead	0.00853	<0.0002	0.0853	<0.002	-	-	-
Manganese	0.00727	<0.003	0.0727	<0.03	-	-	-
Nickel	0.00136	<0.0004	0.0136	<0.004	-	-	-
Selenium	0.0357	<0.001	0.357	<0.01	-	-	-
Vanadium	0.0346	<0.001	0.346	<0.01	-	-	-
Zinc	0.00933	<0.001	0.0933	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.118	<0.019	1.18	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000057	<0.00001	0.00057	<0.0001	-	-	-
Acenaphthene by GCMS	0.00000548	<0.000005	0.0000548	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000119	<0.000005	0.000119	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.99
Conductivity (µS/cm)	460.00
Temperature (°C)	19.40
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564509
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.99
Conductivity (µS/cm)	460.00
Temperature (°C)	19.40
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.123	**Natural Moisture Content (%)**	37
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	73
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564513
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	2.50 - 2.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.741	<0.2	7.41	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.0027	<0.0005	0.027	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00125	<0.0004	0.0125	<0.004	-	-	-
Selenium	0.0271	<0.001	0.271	<0.01	-	-	-
Vanadium	0.0241	<0.001	0.241	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.37	<0.019	3.7	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000183	<0.00001	0.00183	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000185	<0.000005	0.000185	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000108	<0.000005	0.000108	<0.00005	-	-	-
Fluoranthene by GCMS	0.00000674	<0.000005	0.0000674	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000358	<0.00000595	0.000358	<0.0000595	-	-	-
Fluorene by GCMS	0.00000994	<0.000005	0.0000994	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00000693	<0.000005	0.0000693	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.000015	<0.000005	0.00015	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000287	<0.000082	0.00287	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.55
Conductivity (µS/cm)	353.00
Temperature (°C)	20.20
Volume Leachant (Litres)	0.867

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.123	**Natural Moisture Content (%)**	37
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	73
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564513
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF4
Depth (m)	2.50 - 2.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.55
Conductivity (µS/cm)	353.00
Temperature (°C)	20.20
Volume Leachant (Litres)	0.867

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.3
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564526
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.00015	<0.00001	0.0015	<0.0001	-	-	-
Arsenic	0.000619	<0.0005	0.00619	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.006	<0.001	0.06	<0.01	-	-	-
Copper	0.00236	<0.0003	0.0236	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.000538	<0.0004	0.00538	<0.004	-	-	-
Selenium	0.00234	<0.001	0.0234	<0.01	-	-	-
Vanadium	0.0384	<0.001	0.384	<0.01	-	-	-
Zinc	0.00545	<0.001	0.0545	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.00185	<0.0000123	0.0185	<0.000123	-	-	-
Acenaphthene by GCMS	0.000491	<0.000005	0.00491	<0.00005	-	-	-
Acenaphthylene by GCMS	0.000088	<0.000005	0.00088	<0.00005	-	-	-
Fluoranthene by GCMS	0.000267	<0.000005	0.00267	<0.00005	-	-	-
Anthracene by GCMS	0.000136	<0.000005	0.00136	<0.00005	-	-	-
Phenanthrene by GCMS	0.00107	<0.000005	0.0107	<0.00005	-	-	-
Fluorene by GCMS	0.000392	<0.000005	0.00392	<0.00005	-	-	-
Chrysene by GCMS	0.0000101	<0.000005	0.000101	<0.00005	-	-	-
Pyrene by GCMS	0.000164	<0.000005	0.00164	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.00000875	<0.000005	0.0000875	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00447	<0.000082	0.0447	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.62
Conductivity (µS/cm)	1,100.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.3
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564526
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.62
Conductivity (µS/cm)	1,100.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564531
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00151	<0.0005	0.0151	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.000334	<0.0003	0.00334	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.0017	<0.001	0.017	<0.01	-	-	-
Vanadium	0.0989	<0.001	0.989	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000663	<0.00001	0.000663	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000346	<0.000005	0.000346	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000112	<0.000005	0.000112	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000748	<0.000005	0.000748	<0.00005	-	-	-
Anthracene by GCMS	0.0000391	<0.000005	0.000391	<0.00005	-	-	-
Phenanthrene by GCMS	0.000121	<0.000005	0.00121	<0.00005	-	-	-
Fluorene by GCMS	0.0000582	<0.000005	0.000582	<0.00005	-	-	-
Chrysene by GCMS	0.0000139	<0.000005	0.000139	<0.00005	-	-	-
Pyrene by GCMS	0.0000768	<0.000005	0.000768	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000163	<0.000005	0.000163	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000242	<0.000005	0.000242	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.0000135	<0.000005	0.000135	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.0000175	<0.000002	0.000175	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	0.0000178	<0.000005	0.000178	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	0.0000173	<0.000005	0.000173	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000603	<0.000082	0.00603	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.68
Conductivity (µS/cm)	232.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564531
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	0.00121	<0.001	0.0121	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.68
Conductivity (µS/cm)	232.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.891

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.095	**Natural Moisture Content (%)**	6.04
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.3
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564536
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.524	<0.2	5.24	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000123	<0.00001	0.000123	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.0005	<0.0003	0.005	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00223	<0.001	0.0223	<0.01	-	-	-
Vanadium	0.0245	<0.001	0.245	<0.01	-	-	-
Zinc	0.0041	<0.001	0.041	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.00036	<0.00001	0.0036	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000585	<0.000005	0.000585	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000378	<0.000005	0.000378	<0.00005	-	-	-
Fluoranthene by GCMS	0.000131	<0.000005	0.00131	<0.00005	-	-	-
Anthracene by GCMS	0.0000455	<0.000005	0.000455	<0.00005	-	-	-
Phenanthrene by GCMS	0.00044	<0.000005	0.0044	<0.00005	-	-	-
Fluorene by GCMS	0.000225	<0.000005	0.00225	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.000126	<0.000005	0.00126	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00142	<0.000082	0.0142	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.52
Conductivity (µS/cm)	810.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.095	**Natural Moisture Content (%)**	6.04
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.3
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564536
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.52
Conductivity (µS/cm)	810.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	84
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564540
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00163	<0.0005	0.0163	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.000717	<0.0003	0.00717	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00539	<0.001	0.0539	<0.01	-	-	-
Vanadium	0.0603	<0.001	0.603	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000309	<0.00001	0.00309	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000455	<0.000005	0.000455	<0.00005	-	-	-
Acenaphthylene by GCMS	0.000154	<0.000005	0.00154	<0.00005	-	-	-
Fluoranthene by GCMS	0.000158	<0.000005	0.00158	<0.00005	-	-	-
Anthracene by GCMS	0.0000538	<0.000005	0.000538	<0.00005	-	-	-
Phenanthrene by GCMS	0.00028	<0.000005	0.0028	<0.00005	-	-	-
Fluorene by GCMS	0.000126	<0.000005	0.00126	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.000165	<0.000005	0.00165	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.00000643	<0.000005	0.0000643	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.0013	<0.000082	0.013	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.97
Conductivity (µS/cm)	446.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.883

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	84
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564540
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.029	<0.01	0.29	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	0.00122	<0.001	0.0122	<0.01	-	-	-
Toluene	0.00111	<0.001	0.0111	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.97
Conductivity (µS/cm)	446.00
Temperature (°C)	21.20
Volume Leachant (Litres)	0.883

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	10.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564544
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.322	<0.2	3.22	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00369	<0.0005	0.0369	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00093	<0.0003	0.0093	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00703	<0.001	0.0703	<0.01	-	-	-
Vanadium	0.0491	<0.001	0.491	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000261	<0.00001	0.000261	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.00000555	<0.000005	0.0000555	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.00000969	<0.000005	0.0000969	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00000557	<0.000005	0.0000557	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.82
Conductivity (µS/cm)	348.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	10.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564544
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF5
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	10.82
Conductivity (µS/cm)	348.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	4.06
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	96.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564552
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	0.30 - 0.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.000024	<0.00001	0.00024	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0077	<0.001	0.077	<0.01	-	-	-
Copper	0.00228	<0.0003	0.0228	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0249	<0.001	0.249	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000225	<0.00001	0.00225	<0.0001	-	-	-
Acenaphthene by GCMS	0.000227	<0.000005	0.00227	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000332	<0.000005	0.000332	<0.00005	-	-	-
Fluoranthene by GCMS	0.000809	<0.000005	0.00809	<0.00005	-	-	-
Anthracene by GCMS	0.000183	<0.000005	0.00183	<0.00005	-	-	-
Phenanthrene by GCMS	0.00116	<0.00000595	0.0116	<0.0000595	-	-	-
Fluorene by GCMS	0.0000837	<0.000005	0.000837	<0.00005	-	-	-
Chrysene by GCMS	0.0000733	<0.000005	0.000733	<0.00005	-	-	-
Pyrene by GCMS	0.000719	<0.000005	0.00719	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000528	<0.000005	0.000528	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000104	<0.000005	0.000104	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.00000805	<0.000005	0.0000805	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000749	<0.000002	0.0000749	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00359	<0.000082	0.0359	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.60
Conductivity (µS/cm)	1,040.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.896

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	4.06
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	96.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564552
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	0.30 - 0.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.60
Conductivity (µS/cm)	1,040.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.896

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.097	**Natural Moisture Content (%)**	7.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	93.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564556
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	0.70 - 0.70

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.254	<0.2	2.54	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000194	<0.00001	0.000194	<0.0001	-	-	-
Arsenic	0.000926	<0.0005	0.00926	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00589	<0.001	0.0589	<0.01	-	-	-
Copper	0.00385	<0.0003	0.0385	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.000541	<0.0004	0.00541	<0.004	-	-	-
Selenium	0.0011	<0.001	0.011	<0.01	-	-	-
Vanadium	0.0162	<0.001	0.162	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000463	<0.00001	0.00463	<0.0001	-	-	-
Acenaphthene by GCMS	0.00105	<0.000005	0.0105	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000602	<0.000005	0.000602	<0.00005	-	-	-
Fluoranthene by GCMS	0.00163	<0.000005	0.0163	<0.00005	-	-	-
Anthracene by GCMS	0.000496	<0.000005	0.00496	<0.00005	-	-	-
Phenanthrene by GCMS	0.00386	<0.00000595	0.0386	<0.0000595	-	-	-
Fluorene by GCMS	0.000231	<0.000005	0.00231	<0.00005	-	-	-
Chrysene by GCMS	0.00015	<0.000005	0.0015	<0.00005	-	-	-
Pyrene by GCMS	0.00139	<0.000005	0.0139	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000962	<0.000005	0.000962	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000204	<0.000005	0.000204	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.0000124	<0.000005	0.000124	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.0000113	<0.000002	0.000113	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00947	<0.000082	0.0947	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.70
Conductivity (µS/cm)	1,230.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.893

Mcerts Certification does not apply to leachates
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11:27:38 18/06/2018

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.097	**Natural Moisture Content (%)**	7.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	93.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564556
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	0.70 - 0.70

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	0.011	<0.01	0.11	<0.1	-	-	-
Aromatics >EC16-EC21	0.023	<0.01	0.23	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.034	<0.01	0.34	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.034	<0.01	0.34	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.70
Conductivity (µS/cm)	1,230.00
Temperature (°C)	21.30
Volume Leachant (Litres)	0.893

Mcerts Certification does not apply to leachates

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11:27:38 18/06/2018

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564560
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00196	<0.0005	0.0196	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.0004	<0.0004	0.004	<0.004	-	-	-
Selenium	0.00163	<0.001	0.0163	<0.01	-	-	-
Vanadium	0.0138	<0.001	0.138	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000293	<0.00001	0.000293	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000112	<0.000005	0.000112	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000611	<0.000005	0.000611	<0.00005	-	-	-
Anthracene by GCMS	0.0000147	<0.000005	0.000147	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000737	<0.000005	0.000737	<0.00005	-	-	-
Fluorene by GCMS	0.0000109	<0.000005	0.000109	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000618	<0.000005	0.000618	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000263	<0.000082	0.00263	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.56
Conductivity (µS/cm)	160.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564560
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.56
Conductivity (µS/cm)	160.00
Temperature (°C)	20.70
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564567
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00141	<0.0005	0.0141	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00171	<0.001	0.0171	<0.01	-	-	-
Vanadium	0.00939	<0.001	0.0939	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000312	<0.00001	0.000312	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000208	<0.000005	0.000208	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000652	<0.000005	0.000652	<0.00005	-	-	-
Anthracene by GCMS	0.0000256	<0.000005	0.000256	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000964	<0.00000595	0.000964	<0.0000595	-	-	-
Fluorene by GCMS	0.00000744	<0.000005	0.0000744	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00007	<0.000005	0.0007	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000317	<0.000082	0.00317	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.06
Conductivity (µS/cm)	198.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564567
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF6
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.06
Conductivity (µS/cm)	198.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	6.27
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564571
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.000668	<0.0005	0.00668	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0404	<0.001	0.404	<0.01	-	-	-
Copper	0.00249	<0.0003	0.0249	<0.003	-	-	-
Lead	0.00759	<0.0002	0.0759	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000249	<0.00001	0.00249	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000647	<0.000005	0.000647	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000665	<0.000005	0.000665	<0.00005	-	-	-
Fluoranthene by GCMS	0.000544	<0.000005	0.00544	<0.00005	-	-	-
Anthracene by GCMS	0.0000835	<0.000005	0.000835	<0.00005	-	-	-
Phenanthrene by GCMS	0.000913	<0.000005	0.00913	<0.00005	-	-	-
Fluorene by GCMS	0.0000975	<0.000005	0.000975	<0.00005	-	-	-
Chrysene by GCMS	0.0000263	<0.000005	0.000263	<0.00005	-	-	-
Pyrene by GCMS	0.000303	<0.000005	0.00303	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000198	<0.000005	0.000198	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.00000607	<0.000005	0.0000607	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00237	<0.000082	0.0237	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.36
Conductivity (µS/cm)	6,900.00
Temperature (°C)	20.00
Volume Leachant (Litres)	0.894

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.096	**Natural Moisture Content (%)**	6.27
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564571
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.36
Conductivity (µS/cm)	6,900.00
Temperature (°C)	20.00
Volume Leachant (Litres)	0.894

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	84
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564575
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000415	<0.00001	0.000415	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00303	<0.001	0.0303	<0.01	-	-	-
Copper	0.00242	<0.0003	0.0242	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.000567	<0.0004	0.00567	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0125	<0.001	0.125	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0474	<0.0000123	0.474	<0.000123	-	-	-
Acenaphthene by GCMS	0.00159	<0.000005	0.0159	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0207	<0.000005	0.207	<0.00005	-	-	-
Fluoranthene by GCMS	0.00255	<0.000005	0.0255	<0.00005	-	-	-
Anthracene by GCMS	0.00142	<0.000005	0.0142	<0.00005	-	-	-
Phenanthrene by GCMS	0.0117	<0.000005	0.117	<0.00005	-	-	-
Fluorene by GCMS	0.00549	<0.000005	0.0549	<0.00005	-	-	-
Chrysene by GCMS	0.0000685	<0.000005	0.000685	<0.00005	-	-	-
Pyrene by GCMS	0.00157	<0.000005	0.0157	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000778	<0.000005	0.000778	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000187	<0.000005	0.000187	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.0000089	<0.000005	0.000089	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000794	<0.000002	0.0000794	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.0926	<0.000082	0.926	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	0.056	<0.05	0.56	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.83
Conductivity (µS/cm)	1,570.00
Temperature (°C)	20.40
Volume Leachant (Litres)	0.883

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.107	**Natural Moisture Content (%)**	19
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	84
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564575
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	0.028	<0.01	0.28	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	0.018	<0.01	0.18	<0.1	-	-	-
Aromatics >EC12-EC16	0.037	<0.01	0.37	<0.1	-	-	-
Aromatics >EC16-EC21	0.03	<0.01	0.3	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.067	<0.01	0.67	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.123	<0.01	1.23	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	0.00104	<0.001	0.0104	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.83
Conductivity (µS/cm)	1,570.00
Temperature (°C)	20.40
Volume Leachant (Litres)	0.883

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	5.04
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	95.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564581
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Concⁿ in 10:1 eluate (mg/l)		**A_2** 10:1 concⁿ leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.000513	<0.0005	0.00513	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0196	<0.001	0.196	<0.01	-	-	-
Copper	0.00275	<0.0003	0.0275	<0.003	-	-	-
Lead	0.00465	<0.0002	0.0465	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000927	<0.00001	0.000927	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000211	<0.000005	0.000211	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000269	<0.000005	0.000269	<0.00005	-	-	-
Fluoranthene by GCMS	0.000214	<0.000005	0.00214	<0.00005	-	-	-
Anthracene by GCMS	0.0000318	<0.000005	0.000318	<0.00005	-	-	-
Phenanthrene by GCMS	0.000289	<0.000005	0.00289	<0.00005	-	-	-
Fluorene by GCMS	0.0000315	<0.000005	0.000315	<0.00005	-	-	-
Chrysene by GCMS	0.00000723	<0.000005	0.0000723	<0.00005	-	-	-
Pyrene by GCMS	0.000213	<0.000005	0.00213	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.00000561	<0.000005	0.0000561	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000932	<0.000082	0.00932	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.18
Conductivity (µS/cm)	3,950.00
Temperature (°C)	19.90
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	5.04
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	95.2
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564581
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.18
Conductivity (µS/cm)	3,950.00
Temperature (°C)	19.90
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.6
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.4
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564585
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.243	<0.2	2.43	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00227	<0.0005	0.0227	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00344	<0.001	0.0344	<0.01	-	-	-
Copper	0.000527	<0.0003	0.00527	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00113	<0.0004	0.0113	<0.004	-	-	-
Selenium	0.00376	<0.001	0.0376	<0.01	-	-	-
Vanadium	0.019	<0.001	0.19	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000353	<0.00001	0.00353	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000422	<0.000005	0.000422	<0.00005	-	-	-
Acenaphthylene by GCMS	0.000104	<0.000005	0.00104	<0.00005	-	-	-
Fluoranthene by GCMS	0.000115	<0.000005	0.00115	<0.00005	-	-	-
Anthracene by GCMS	0.0000467	<0.000005	0.000467	<0.00005	-	-	-
Phenanthrene by GCMS	0.000369	<0.000005	0.00369	<0.00005	-	-	-
Fluorene by GCMS	0.000135	<0.000005	0.00135	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000825	<0.000005	0.000825	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00125	<0.000082	0.0125	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.00
Conductivity (µS/cm)	423.00
Temperature (°C)	19.90
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	10.6
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.4
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564585
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE6
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.00
Conductivity (µS/cm)	423.00
Temperature (°C)	19.90
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.095	**Natural Moisture Content (%)**	5.37
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564590
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00646	<0.001	0.0646	<0.01	-	-	-
Copper	0.00169	<0.0003	0.0169	<0.003	-	-	-
Lead	0.00178	<0.0002	0.0178	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	0.00101	<0.001	0.0101	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000145	<0.0000123	0.00145	<0.000123	-	-	-
Acenaphthene by GCMS	0.0000557	<0.000005	0.000557	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000162	<0.000005	0.000162	<0.00005	-	-	-
Fluoranthene by GCMS	0.000553	<0.000005	0.00553	<0.00005	-	-	-
Anthracene by GCMS	0.0000519	<0.000005	0.000519	<0.00005	-	-	-
Phenanthrene by GCMS	0.000471	<0.000005	0.00471	<0.00005	-	-	-
Fluorene by GCMS	0.0000286	<0.000005	0.000286	<0.00005	-	-	-
Chrysene by GCMS	0.0000423	<0.000005	0.000423	<0.00005	-	-	-
Pyrene by GCMS	0.000429	<0.000005	0.00429	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000324	<0.000005	0.000324	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000125	<0.000005	0.000125	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.00000738	<0.000005	0.0000738	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000373	<0.000002	0.0000373	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00185	<0.000082	0.0185	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.20
Conductivity (µS/cm)	4.90
Temperature (°C)	21.20
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.095	**Natural Moisture Content (%)**	5.37
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	94.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564590
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.20
Conductivity (µS/cm)	4.90
Temperature (°C)	21.20
Volume Leachant (Litres)	0.895

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	9.05
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564594
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	1.20 - 1.20

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000198	<0.00001	0.000198	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00755	<0.001	0.0755	<0.01	-	-	-
Copper	0.00216	<0.0003	0.0216	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0032	<0.001	0.032	<0.01	-	-	-
Zinc	0.00211	<0.001	0.0211	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000216	<0.00001	0.00216	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000275	<0.000005	0.000275	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000155	<0.000005	0.000155	<0.00005	-	-	-
Fluoranthene by GCMS	0.000598	<0.000005	0.00598	<0.00005	-	-	-
Anthracene by GCMS	0.000088	<0.000005	0.00088	<0.00005	-	-	-
Phenanthrene by GCMS	0.000678	<0.000005	0.00678	<0.00005	-	-	-
Fluorene by GCMS	0.0000279	<0.000005	0.000279	<0.00005	-	-	-
Chrysene by GCMS	0.0000311	<0.000005	0.000311	<0.00005	-	-	-
Pyrene by GCMS	0.000587	<0.000005	0.00587	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000236	<0.000005	0.000236	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.00000768	<0.000005	0.0000768	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000302	<0.000002	0.0000302	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.0023	<0.000082	0.023	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.96
Conductivity (µS/cm)	2.32
Temperature (°C)	21.20
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.098	**Natural Moisture Content (%)**	9.05
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564594
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	1.20 - 1.20

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.01	<0.01	0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.96
Conductivity (µS/cm)	2.32
Temperature (°C)	21.20
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564598
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	1.70 - 1.70

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.39	<0.2	3.9	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000146	<0.00001	0.000146	<0.0001	-	-	-
Arsenic	0.00145	<0.0005	0.0145	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00324	<0.001	0.0324	<0.01	-	-	-
Copper	0.0024	<0.0003	0.024	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00213	<0.001	0.0213	<0.01	-	-	-
Vanadium	0.0247	<0.001	0.247	<0.01	-	-	-
Zinc	0.00885	<0.001	0.0885	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000428	<0.00001	0.000428	<0.0001	-	-	-
Acenaphthene by GCMS	0.00000597	<0.000005	0.0000597	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000494	<0.000005	0.000494	<0.00005	-	-	-
Anthracene by GCMS	0.0000121	<0.000005	0.000121	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000465	<0.000005	0.000465	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000513	<0.000005	0.000513	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000208	<0.000082	0.00208	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.19
Conductivity (µS/cm)	480.00
Temperature (°C)	20.30
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90.1
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564598
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	1.70 - 1.70

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.19
Conductivity (µS/cm)	480.00
Temperature (°C)	20.30
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564602
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	3.74	<0.2	37.4	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000189	<0.00001	0.000189	<0.0001	-	-	-
Arsenic	0.0411	<0.0005	0.411	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00333	<0.001	0.0333	<0.01	-	-	-
Copper	0.0155	<0.0003	0.155	<0.003	-	-	-
Lead	0.000368	<0.0002	0.00368	<0.002	-	-	-
Manganese	0.00801	<0.003	0.0801	<0.03	-	-	-
Nickel	0.00313	<0.0004	0.0313	<0.004	-	-	-
Selenium	0.00244	<0.001	0.0244	<0.01	-	-	-
Vanadium	0.0823	<0.001	0.823	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.992	<0.019	9.92	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000258	<0.00001	0.000258	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000264	<0.000005	0.000264	<0.00005	-	-	-
Anthracene by GCMS	0.00000514	<0.000005	0.0000514	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000209	<0.000005	0.000209	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000231	<0.000005	0.000231	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.00000924	<0.000005	0.0000924	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.0000043	<0.000002	0.000043	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	0.00000765	<0.000005	0.0000765	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000123	<0.000082	0.00123	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.72
Conductivity (µS/cm)	179.00
Temperature (°C)	21.10
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.100	**Natural Moisture Content (%)**	11.1
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	90
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564602
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF7
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	9.72
Conductivity (µS/cm)	179.00
Temperature (°C)	21.10
Volume Leachant (Litres)	0.890

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	9.29
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.5
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564612
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000759	<0.00001	0.000759	<0.0001	-	-	-
Arsenic	0.00101	<0.0005	0.0101	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00435	<0.001	0.0435	<0.01	-	-	-
Copper	0.00132	<0.0003	0.0132	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	0.00944	<0.003	0.0944	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00301	<0.001	0.0301	<0.01	-	-	-
Vanadium	0.053	<0.001	0.53	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.0988	<0.019	0.988	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000078	<0.00001	0.00078	<0.0001	-	-	-
Acenaphthene by GCMS	0.000104	<0.000005	0.00104	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000063	<0.000005	0.000063	<0.00005	-	-	-
Fluoranthene by GCMS	0.000197	<0.000005	0.00197	<0.00005	-	-	-
Anthracene by GCMS	0.0000505	<0.000005	0.000505	<0.00005	-	-	-
Phenanthrene by GCMS	0.000205	<0.000005	0.00205	<0.00005	-	-	-
Fluorene by GCMS	0.0000407	<0.000005	0.000407	<0.00005	-	-	-
Chrysene by GCMS	0.00000995	<0.000005	0.0000995	<0.00005	-	-	-
Pyrene by GCMS	0.000195	<0.000005	0.00195	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000122	<0.000005	0.000122	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000899	<0.000082	0.00899	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.27
Conductivity (µS/cm)	508.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	9.29
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.5
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564612
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.27
Conductivity (µS/cm)	508.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	9.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.4
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564616
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000111	<0.00001	0.000111	<0.0001	-	-	-
Arsenic	0.00144	<0.0005	0.0144	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00177	<0.001	0.0177	<0.01	-	-	-
Copper	0.00169	<0.0003	0.0169	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	0.00873	<0.003	0.0873	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.0048	<0.001	0.048	<0.01	-	-	-
Vanadium	0.0777	<0.001	0.777	<0.01	-	-	-
Zinc	0.00868	<0.001	0.0868	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.445	<0.019	4.45	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000635	<0.00001	0.000635	<0.0001	-	-	-
Acenaphthene by GCMS	0.000042	<0.000005	0.00042	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000201	<0.000005	0.000201	<0.00005	-	-	-
Anthracene by GCMS	0.00000747	<0.000005	0.0000747	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000452	<0.000005	0.000452	<0.00005	-	-	-
Fluorene by GCMS	0.0000135	<0.000005	0.000135	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000201	<0.000005	0.000201	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000212	<0.000082	0.00212	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.01
Conductivity (µS/cm)	372.00
Temperature (°C)	19.50
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.099	**Natural Moisture Content (%)**	9.41
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	91.4
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564616
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.01
Conductivity (µS/cm)	372.00
Temperature (°C)	19.50
Volume Leachant (Litres)	0.892

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	13.6
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	88
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564620
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	2.51	<0.2	25.1	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00362	<0.0005	0.0362	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00118	<0.0003	0.0118	<0.003	-	-	-
Lead	0.00028	<0.0002	0.0028	<0.002	-	-	-
Manganese	0.00829	<0.003	0.0829	<0.03	-	-	-
Nickel	0.00321	<0.0004	0.0321	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0025	<0.001	0.025	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.936	<0.019	9.36	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000167	<0.00001	0.000167	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.00000695	<0.000005	0.0000695	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.00000913	<0.000005	0.0000913	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00000676	<0.000005	0.0000676	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.00082	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	8.70
Conductivity (µS/cm)	199.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.888

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	13.6
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	88
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564620
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF8
Depth (m)	1.50 - 1.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	8.70
Conductivity (µS/cm)	199.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.888

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.104	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564625
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	3.00 - 3.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.448	<0.2	4.48	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.000805	<0.0005	0.00805	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00672	<0.0003	0.0672	<0.003	-	-	-
Lead	0.00388	<0.0002	0.0388	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00121	<0.0004	0.0121	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.47	<0.019	4.7	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0656	<0.00001	0.656	<0.0001	-	-	-
Acenaphthene by GCMS	0.000689	<0.000005	0.00689	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0144	<0.000005	0.144	<0.00005	-	-	-
Fluoranthene by GCMS	0.00266	<0.000005	0.0266	<0.00005	-	-	-
Anthracene by GCMS	0.00119	<0.000005	0.0119	<0.00005	-	-	-
Phenanthrene by GCMS	0.0118	<0.000005	0.118	<0.00005	-	-	-
Fluorene by GCMS	0.00444	<0.000005	0.0444	<0.00005	-	-	-
Chrysene by GCMS	0.000155	<0.000005	0.00155	<0.00005	-	-	-
Pyrene by GCMS	0.00263	<0.000005	0.0263	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.000188	<0.000005	0.00188	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.00018	<0.000005	0.0018	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.000261	<0.000005	0.00261	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.000126	<0.000002	0.00126	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	0.000192	<0.000005	0.00192	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	0.000239	<0.000005	0.00239	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	0.00015	<0.000005	0.0015	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.105	<0.000082	1.05	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	0.062	<0.05	0.62	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.46
Conductivity (µS/cm)	6,550.00
Temperature (°C)	21.00
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.104	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564625
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF1
Depth (m)	3.00 - 3.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	0.031	<0.01	0.31	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	0.021	<0.01	0.21	<0.1	-	-	-
Aromatics >EC12-EC16	0.03	<0.01	0.3	<0.1	-	-	-
Aromatics >EC16-EC21	0.03	<0.01	0.3	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.06	<0.01	0.6	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.122	<0.01	1.22	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.46
Conductivity (µS/cm)	6,550.00
Temperature (°C)	21.00
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.092	**Natural Moisture Content (%)**	3.09
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564634
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE8
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000163	<0.00001	0.000163	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00955	<0.001	0.0955	<0.01	-	-	-
Copper	0.00188	<0.0003	0.0188	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.000447	<0.0004	0.00447	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0281	<0.001	0.281	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.00011	<0.00001	0.0011	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000482	<0.000005	0.000482	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000121	<0.000005	0.000121	<0.00005	-	-	-
Fluoranthene by GCMS	0.000114	<0.000005	0.00114	<0.00005	-	-	-
Anthracene by GCMS	0.0000369	<0.000005	0.000369	<0.00005	-	-	-
Phenanthrene by GCMS	0.000103	<0.000005	0.00103	<0.00005	-	-	-
Fluorene by GCMS	0.0000102	<0.000005	0.000102	<0.00005	-	-	-
Chrysene by GCMS	0.00000852	<0.000005	0.0000852	<0.00005	-	-	-
Pyrene by GCMS	0.000116	<0.000005	0.00116	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.00000609	<0.000005	0.0000609	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000565	<0.000082	0.00565	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.57
Conductivity (µS/cm)	941.00
Temperature (°C)	19.80
Volume Leachant (Litres)	0.897

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.092	**Natural Moisture Content (%)**	3.09
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564634
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE8
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.57
Conductivity (µS/cm)	941.00
Temperature (°C)	19.80
Volume Leachant (Litres)	0.897

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	4.38
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	95.8
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564639
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE8
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	2.92	<0.2	29.2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00109	<0.0005	0.0109	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00741	<0.001	0.0741	<0.01	-	-	-
Copper	0.00509	<0.0003	0.0509	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00102	<0.0004	0.0102	<0.004	-	-	-
Selenium	0.00276	<0.001	0.0276	<0.01	-	-	-
Vanadium	0.0305	<0.001	0.305	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000877	<0.00001	0.000877	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000521	<0.000005	0.000521	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000642	<0.000005	0.000642	<0.00005	-	-	-
Anthracene by GCMS	0.0000146	<0.000005	0.000146	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000893	<0.000005	0.000893	<0.00005	-	-	-
Fluorene by GCMS	0.00000614	<0.000005	0.0000614	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000694	<0.000005	0.000694	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000384	<0.000082	0.00384	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.47
Conductivity (µS/cm)	712.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.896

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.094	**Natural Moisture Content (%)**	4.38
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	95.8
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564639
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE8
Depth (m)	2.00 - 2.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.47
Conductivity (µS/cm)	712.00
Temperature (°C)	19.70
Volume Leachant (Litres)	0.896

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.090	**Natural Moisture Content (%)**	0.14
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	99.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564647
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0107	<0.001	0.107	<0.01	-	-	-
Copper	0.000595	<0.0003	0.00595	<0.003	-	-	-
Lead	0.00161	<0.0002	0.0161	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000672	<0.00001	0.000672	<0.0001	-	-	-
Acenaphthene by GCMS	0.00000954	<0.000005	0.0000954	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.000138	<0.000005	0.00138	<0.00005	-	-	-
Anthracene by GCMS	0.0000153	<0.000005	0.000153	<0.00005	-	-	-
Phenanthrene by GCMS	0.000187	<0.000005	0.00187	<0.00005	-	-	-
Fluorene by GCMS	0.00000797	<0.000005	0.0000797	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.000128	<0.000005	0.00128	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000553	<0.000082	0.00553	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.42
Conductivity (µS/cm)	7,170.00
Temperature (°C)	20.30
Volume Leachant (Litres)	0.900

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.090	**Natural Moisture Content (%)**	0.14
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	99.9
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564647
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.42
Conductivity (µS/cm)	7,170.00
Temperature (°C)	20.30
Volume Leachant (Litres)	0.900

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564651
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	1.20 - 1.20

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0106	<0.001	0.106	<0.01	-	-	-
Copper	0.00122	<0.0003	0.0122	<0.003	-	-	-
Lead	0.00415	<0.0002	0.0415	<0.002	-	-	-
Manganese	0.014	<0.003	0.14	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.00159	<0.001	0.0159	<0.01	-	-	-
Zinc	0.00225	<0.001	0.0225	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.0322	<0.019	0.322	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000365	<0.00001	0.00365	<0.0001	-	-	-
Acenaphthene by GCMS	0.000201	<0.000005	0.00201	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000143	<0.000005	0.000143	<0.00005	-	-	-
Fluoranthene by GCMS	0.0022	<0.000005	0.022	<0.00005	-	-	-
Anthracene by GCMS	0.000319	<0.000005	0.00319	<0.00005	-	-	-
Phenanthrene by GCMS	0.00422	<0.000005	0.0422	<0.00005	-	-	-
Fluorene by GCMS	0.00014	<0.000005	0.0014	<0.00005	-	-	-
Chrysene by GCMS	0.0000978	<0.000005	0.000978	<0.00005	-	-	-
Pyrene by GCMS	0.0022	<0.000005	0.022	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000621	<0.000005	0.000621	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000174	<0.000005	0.000174	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.00000886	<0.000005	0.0000886	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000764	<0.000002	0.0000764	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00986	<0.000082	0.0986	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.94
Conductivity (µS/cm)	2,000.00
Temperature (°C)	19.50
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564651
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	1.20 - 1.20

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	0.014	<0.01	0.14	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.014	<0.01	0.14	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.015	<0.01	0.15	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.94
Conductivity (µS/cm)	2,000.00
Temperature (°C)	19.50
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.093	**Natural Moisture Content (%)**	3.09
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564658
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00332	<0.001	0.0332	<0.01	-	-	-
Copper	0.000698	<0.0003	0.00698	<0.003	-	-	-
Lead	0.49	<0.0002	4.9	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	0.0153	<0.001	0.153	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000347	<0.00001	0.00347	<0.0001	-	-	-
Acenaphthene by GCMS	0.000196	<0.000005	0.00196	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000453	<0.000005	0.000453	<0.00005	-	-	-
Fluoranthene by GCMS	0.00303	<0.000005	0.0303	<0.00005	-	-	-
Anthracene by GCMS	0.00025	<0.000005	0.0025	<0.00005	-	-	-
Phenanthrene by GCMS	0.00344	<0.000005	0.0344	<0.00005	-	-	-
Fluorene by GCMS	0.000134	<0.000005	0.00134	<0.00005	-	-	-
Chrysene by GCMS	0.000115	<0.000005	0.00115	<0.00005	-	-	-
Pyrene by GCMS	0.0031	<0.000005	0.031	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.000086	<0.000005	0.00086	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000207	<0.000005	0.000207	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.0000099	<0.000005	0.000099	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000723	<0.000002	0.0000723	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.0108	<0.000082	0.108	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.29
Conductivity (µS/cm)	4,030.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.897

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.093	**Natural Moisture Content (%)**	3.09
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564658
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BE7
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	0.024	<0.01	0.24	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	0.024	<0.01	0.24	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	0.025	<0.01	0.25	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.29
Conductivity (µS/cm)	4,030.00
Temperature (°C)	20.90
Volume Leachant (Litres)	0.897

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564670
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	0.0000149	<0.00001	0.000149	<0.0001	-	-	-
Arsenic	0.00138	<0.0005	0.0138	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.0016	<0.001	0.016	<0.01	-	-	-
Copper	0.00364	<0.0003	0.0364	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	0.00169	<0.001	0.0169	<0.01	-	-	-
Vanadium	0.158	<0.001	1.58	<0.01	-	-	-
Zinc	0.00263	<0.001	0.0263	<0.01	-	-	-
Iron (Dis.Filt) mg/l	0.316	<0.019	3.16	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000628	<0.00001	0.000628	<0.0001	-	-	-
Acenaphthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000143	<0.000005	0.000143	<0.00005	-	-	-
Fluoranthene by GCMS	0.0000109	<0.000005	0.000109	<0.00005	-	-	-
Anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Phenanthrene by GCMS	0.0000107	<0.000005	0.000107	<0.00005	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.00000955	<0.000005	0.0000955	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000108	<0.000082	0.00108	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.07
Conductivity (µS/cm)	379.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.101	**Natural Moisture Content (%)**	12.4
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	89
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564670
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	0.50 - 0.50

Eluate Analysis	**C_2** Concⁿ in 10:1 eluate (mg/l)		**A_2** 10:1 concⁿ leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.07
Conductivity (µS/cm)	379.00
Temperature (°C)	19.60
Volume Leachant (Litres)	0.889

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.092	**Natural Moisture Content (%)**	2.35
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564675
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00382	<0.001	0.0382	<0.01	-	-	-
Copper	<0.0003	<0.0003	<0.003	<0.003	-	-	-
Lead	<0.0002	<0.0002	<0.002	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	<0.0004	<0.0004	<0.004	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.0384	<0.001	0.384	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.0000313	<0.00001	0.000313	<0.0001	-	-	-
Acenaphthene by GCMS	0.00000502	<0.000005	0.0000502	<0.00005	-	-	-
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Fluoranthene by GCMS	0.000024	<0.000005	0.00024	<0.00005	-	-	-
Anthracene by GCMS	0.00000677	<0.000005	0.0000677	<0.00005	-	-	-
Phenanthrene by GCMS	0.000029	<0.00000595	0.00029	<0.0000595	-	-	-
Fluorene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Chrysene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Pyrene by GCMS	0.0000309	<0.000005	0.000309	<0.00005	-	-	-
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	<0.000002	<0.000002	<0.00002	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.000127	<0.000082	0.00127	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.84
Conductivity (µS/cm)	1,250.00
Temperature (°C)	20.40
Volume Leachant (Litres)	0.898

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.092	**Natural Moisture Content (%)**	2.35
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	97.7
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564675
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	1.00 - 1.00

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.84
Conductivity (µS/cm)	1,250.00
Temperature (°C)	20.40
Volume Leachant (Litres)	0.898

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564682
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	<0.2	<0.2	<2	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	<0.0005	<0.0005	<0.005	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	0.00137	<0.001	0.0137	<0.01	-	-	-
Copper	0.00174	<0.0003	0.0174	<0.003	-	-	-
Lead	0.000582	<0.0002	0.00582	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.000421	<0.0004	0.00421	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	0.00235	<0.001	0.0235	<0.01	-	-	-
Zinc	<0.001	<0.001	<0.01	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000294	<0.00001	0.00294	<0.0001	-	-	-
Acenaphthene by GCMS	0.0000761	<0.000005	0.000761	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000454	<0.000005	0.000454	<0.00005	-	-	-
Fluoranthene by GCMS	0.000649	<0.000005	0.00649	<0.00005	-	-	-
Anthracene by GCMS	0.0000595	<0.000005	0.000595	<0.00005	-	-	-
Phenanthrene by GCMS	0.000431	<0.000005	0.00431	<0.00005	-	-	-
Fluorene by GCMS	0.0000407	<0.000005	0.000407	<0.00005	-	-	-
Chrysene by GCMS	0.0000448	<0.000005	0.000448	<0.00005	-	-	-
Pyrene by GCMS	0.000614	<0.000005	0.00614	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000478	<0.000005	0.000478	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000169	<0.000005	0.000169	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.00000792	<0.000005	0.0000792	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.00000957	<0.000002	0.0000957	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00234	<0.000082	0.0234	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.98
Conductivity (µS/cm)	2,080.00
Temperature (°C)	20.80
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564682
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	1.80 - 1.80

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	11.98
Conductivity (µS/cm)	2,080.00
Temperature (°C)	20.80
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564689
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
Ammoniacal Nitrogen as N	0.516	<0.2	5.16	<2	-	-	-
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	-	-	-
Arsenic	0.00193	<0.0005	0.0193	<0.005	-	-	-
Cadmium	<0.00008	<0.00008	<0.0008	<0.0008	-	-	-
Chromium	<0.001	<0.001	<0.01	<0.01	-	-	-
Copper	0.00964	<0.0003	0.0964	<0.003	-	-	-
Lead	0.00455	<0.0002	0.0455	<0.002	-	-	-
Manganese	<0.003	<0.003	<0.03	<0.03	-	-	-
Nickel	0.00167	<0.0004	0.0167	<0.004	-	-	-
Selenium	<0.001	<0.001	<0.01	<0.01	-	-	-
Vanadium	<0.001	<0.001	<0.01	<0.01	-	-	-
Zinc	0.00153	<0.001	0.0153	<0.01	-	-	-
Iron (Dis.Filt) mg/l	<0.019	<0.019	<0.19	<0.19	-	-	-
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	0.000291	<0.00001	0.00291	<0.0001	-	-	-
Acenaphthene by GCMS	0.000163	<0.000005	0.00163	<0.00005	-	-	-
Acenaphthylene by GCMS	0.0000521	<0.000005	0.000521	<0.00005	-	-	-
Fluoranthene by GCMS	0.000688	<0.000005	0.00688	<0.00005	-	-	-
Anthracene by GCMS	0.0000613	<0.000005	0.000613	<0.00005	-	-	-
Phenanthrene by GCMS	0.000535	<0.000005	0.00535	<0.00005	-	-	-
Fluorene by GCMS	0.0000544	<0.000005	0.000544	<0.00005	-	-	-
Chrysene by GCMS	0.0000539	<0.000005	0.000539	<0.00005	-	-	-
Pyrene by GCMS	0.000697	<0.000005	0.00697	<0.00005	-	-	-
Benz(a)anthracene by GCMS	0.0000439	<0.000005	0.000439	<0.00005	-	-	-
Benzo(b)fluoranthene by GCMS	0.0000211	<0.000005	0.000211	<0.00005	-	-	-
Benzo(k)fluoranthene by GCMS	0.0000119	<0.000005	0.000119	<0.00005	-	-	-
Benzo(a)pyrene by GCMS	0.0000149	<0.000002	0.000149	<0.00002	-	-	-
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00005	<0.00005	-	-	-
PAH 16 EPA Total by GCMS	0.00269	<0.000082	0.0269	<0.00082	-	-	-
TPH CWG (W)							
Surrogate Recovery	-	<0	-	<0	-	-	-
GRO TOT (C5-C12)	<0.05	<0.05	<0.5	<0.5	-	-	-
Aliphatics C5-C6	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C6-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C8-C10	<0.01	<0.01	<0.1	<0.1	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.15
Conductivity (µS/cm)	4.53
Temperature (°C)	21.30
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates
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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

CEN 10:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESULTS

REF : BS EN 12457/2

Client Reference		**Site Location**	Llanwern
Mass Sample taken (kg)	0.103	**Natural Moisture Content (%)**	14.9
Mass of dry sample (kg)	0.090	**Dry Matter Content (%)**	87
Particle Size <4mm	>95%		

Case	
SDG	180516-60
Lab Sample Number(s)	17564689
Sampled Date	15-May-2018
Customer Sample Ref.	TP3BF2
Depth (m)	2.30 - 2.30

Eluate Analysis	**C_2** Conc^n in 10:1 eluate (mg/l)		**A_2** 10:1 conc^n leached (mg/kg)				
	Result	**Limit of Detection**	**Result**	**Limit of Detection**			
TPH CWG (W)							
Aliphatics >C10-C12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C12-C16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C16-C21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aliphatics >C21-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aliphatics >C12-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics C6-C7	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >C7-C8	<0.01	<0.01	<0.1	<0.1	-	-	-
MTBE GC-FID	<0.003	<0.003	<0.03	<0.03	-	-	-
Aromatics >EC8 -EC10	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC10-EC12	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC12-EC16	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC16-EC21	<0.01	<0.01	<0.1	<0.1	-	-	-
Aromatics >EC21-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Total Aromatics >EC12-EC35	<0.01	<0.01	<0.1	<0.1	-	-	-
Benzene by GC	<0.007	<0.007	<0.07	<0.07	-	-	-
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
Toluene by GC	<0.004	<0.004	<0.04	<0.04	-	-	-
Ethylbenzene by GC	<0.005	<0.005	<0.05	<0.05	-	-	-
m & p Xylene by GC	<0.008	<0.008	<0.08	<0.08	-	-	-
o Xylene by GC	<0.003	<0.003	<0.03	<0.03	-	-	-
Sum m&p and o Xylene by GC	<0.011	<0.011	<0.11	<0.11	-	-	-
Sum of BTEX by GC	<0.028	<0.028	<0.28	<0.28	-	-	-
Aliphatics >C16-C35	<0.01	<0.01	<0.1	<0.1	-	-	-
VOC MS (W)							
Benzene	<0.001	<0.001	<0.01	<0.01	-	-	-
Toluene	<0.001	<0.001	<0.01	<0.01	-	-	-
Ethylbenzene	<0.001	<0.001	<0.01	<0.01	-	-	-
p/m-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
o-Xylene	<0.001	<0.001	<0.01	<0.01	-	-	-
Total Xylenes	<0.002	<0.002	<0.02	<0.02	-	-	-

Leach Test Information

Date Prepared	17-May-2018
pH (pH Units)	12.15
Conductivity (µS/cm)	4.53
Temperature (°C)	21.30
Volume Leachant (Litres)	0.887

Mcerts Certification does not apply to leachates

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CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Table of Results - Appendix

Method No	Reference	Description
ASB_PREP		
PM001		Preparation of Samples for Metals Analysis
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM173	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM221	Inductively Coupled Plasma - Atomic Emission Spectroscopy. An Atlas of Spectral Information: Winge, Fassel, Peterson and Floyd	Determination of Acid extractable Sulphate in Soils by IRIS Emission Spectrometer
TM224	US EPA Method 6010B	Determination of Alkaline Metals by iCap 6500 Duo ICP-OES
TM243		Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4.	Determination of pH in Water and Leachate using the GLpH pH Meter
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Test Completion Dates

Lab Sample No(s)	17564571	17564581	17564585	17564647	17564651	17564658	17564634	17564639	17564643	17564468
Customer Sample Ref.	TP3BE6	TP3BE6	TP3BE6	TP3BE7	TP3BE7	TP3BE7	TP3BE8	TP3BE8	TP3BE8-V	TP3BF1
AGS Ref.										
Depth	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.80 - 1.80	1.00 - 1.00	2.00 - 2.00	2.20 - 2.20	0.50 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkali Metals by iCap-OES (Soil)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018		23-May-2018
Ammoniacal Nitrogen	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018		21-May-2018
Ammonium Soil by Titration	23-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018
Anions by Kone (soil)	21-May-2018		21-May-2018	21-May-2018		21-May-2018	21-May-2018	21-May-2018		21-May-2018
Asbestos ID in Solid Samples	22-May-2018		22-May-2018	21-May-2018		22-May-2018	21-May-2018	22-May-2018		22-May-2018
Asbestos Quantification - Full	29-May-2018									
CEN 10:1 Leachate (1 Stage)	17-May-2018	17-May-2018	17-May-2018	17-May-2018	22-May-2018	17-May-2018	22-May-2018	17-May-2018		22-May-2018
CEN Readings	18-May-2018	18-May-2018	18-May-2018	22-May-2018	18-May-2018	22-May-2018	24-May-2018	18-May-2018		18-May-2018
Cyanide Comp/Free/Total/Thiocyanate	23-May-2018	23-May-2018	18-May-2018	18-May-2018	18-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	18-May-2018
Dissolved Metals by ICP-MS	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018		23-May-2018
EPH CWG (Aliphatic) Aqueous GC (W)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018		22-May-2018
EPH CWG (Aliphatic) GC (S)	25-May-2018	25-May-2018	22-May-2018	25-May-2018	22-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018	25-May-2018
EPH CWG (Aromatic) Aqueous GC (W)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018		22-May-2018
EPH CWG (Aromatic) GC (S)	25-May-2018	23-May-2018	22-May-2018	23-May-2018	22-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	25-May-2018
GRO by GC-FID (S)	24-May-2018	24-May-2018	23-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
GRO by GC-FID (W)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018		22-May-2018
Mercury Dissolved	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018		22-May-2018
Metals in solid samples by OES	24-May-2018	24-May-2018	22-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018
PAH by GCMS	21-May-2018	21-May-2018	21-May-2018	24-May-2018	21-May-2018	23-May-2018	21-May-2018	24-May-2018	21-May-2018	21-May-2018
PAH Spec MS - Aqueous (W)	22-May-2018	23-May-2018	22-May-2018	23-May-2018	21-May-2018	23-May-2018	25-May-2018	21-May-2018		21-May-2018
pH	23-May-2018	22-May-2018	22-May-2018	23-May-2018	21-May-2018	23-May-2018	23-May-2018	23-May-2018	21-May-2018	22-May-2018
pH Value	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018		22-May-2018
Phenols by HPLC (S)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	21-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Sample description	16-May-2018	16-May-2018	16-May-2018	17-May-2018	16-May-2018	16-May-2018	16-May-2018	17-May-2018	16-May-2018	16-May-2018
Total Organic Carbon	22-May-2018	23-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018
Total Sulphate	22-May-2018		21-May-2018	23-May-2018		21-May-2018	23-May-2018	23-May-2018		22-May-2018
Total Sulphur	18-May-2018		21-May-2018	21-May-2018		23-May-2018	21-May-2018	18-May-2018		18-May-2018
TPH CWG (W)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018		22-May-2018
TPH CWG GC (S)	25-May-2018	25-May-2018	23-May-2018	25-May-2018	23-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018	25-May-2018
VOC MS (S)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
VOC MS (W)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018		23-May-2018

Lab Sample No(s)	17564526	17564575	17564625	17564670	17564675	17564682	17564689	17564478	17564485	17564492
Customer Sample Ref.	TP3BF1	TP3BF1	TP3BF1	TP3BF2	TP3BF2	TP3BF2	TP3BF2	TP3BF3	TP3BF3	TP3BF3
AGS Ref.										
Depth	1.00 - 1.00	2.00 - 2.00	3.00 - 3.00	0.50 - 0.50	1.00 - 1.00	1.80 - 1.80	2.30 - 2.30	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkali Metals by iCap-OES (Soil)	23-May-2018	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018
Ammoniacal Nitrogen	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018
Ammonium Soil by Titration	22-May-2018	23-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018
Anions by Kone (soil)		21-May-2018			21-May-2018		21-May-2018	21-May-2018		21-May-2018
Asbestos ID in Solid Samples		22-May-2018			22-May-2018		22-May-2018	21-May-2018		21-May-2018
Asbestos Quantification - Full							29-May-2018			
CEN 10:1 Leachate (1 Stage)	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	22-May-2018	17-May-2018	17-May-2018
CEN Readings	21-May-2018	22-May-2018	22-May-2018	18-May-2018	22-May-2018	22-May-2018	21-May-2018	24-May-2018	22-May-2018	22-May-2018
Cyanide Comp/Free/Total/Thiocyanate	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	18-May-2018	23-May-2018	23-May-2018	23-May-2018
Dissolved Metals by ICP-MS	23-May-2018	23-May-2018	23-May-2018	22-May-2018	11-Jun-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
EPH CWG (Aliphatic) Aqueous GC (W)	22-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
EPH CWG (Aliphatic) GC (S)	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	24-May-2018	25-May-2018
EPH CWG (Aromatic) Aqueous GC (W)	22-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
EPH CWG (Aromatic) GC (S)	25-May-2018	25-May-2018	24-May-2018	25-May-2018	23-May-2018	24-May-2018	24-May-2018	23-May-2018	24-May-2018	23-May-2018
GRO by GC-FID (S)	24-May-2018	24-May-2018	24-May-2018	24-May-2018	23-May-2018	24-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018
GRO by GC-FID (W)	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018
Mercury Dissolved	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Metals in solid samples by OES	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018
PAH by GCMS	24-May-2018	24-May-2018	24-May-2018	21-May-2018	21-May-2018	21-May-2018	24-May-2018	24-May-2018	21-May-2018	21-May-2018
PAH Spec MS - Aqueous (W)	23-May-2018	23-May-2018	23-May-2018	22-May-2018	24-May-2018	23-May-2018	23-May-2018	25-May-2018	24-May-2018	22-May-2018
pH	22-May-2018	21-May-2018	21-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
pH Value	22-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Phenols by HPLC (S)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Sample description	16-May-2018	16-May-2018	16-May-2018	16-May-2018	17-May-2018	17-May-2018	16-May-2018	17-May-2018	17-May-2018	17-May-2018
Total Organic Carbon	22-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Total Sulphate		23-May-2018			22-May-2018		23-May-2018	21-May-2018		22-May-2018
Total Sulphur		23-May-2018			18-May-2018		23-May-2018	23-May-2018		18-May-2018
TPH CWG (W)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
TPH CWG GC (S)	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	24-May-2018	25-May-2018
VOC MS (S)	23-May-2018	23-May-2018	23-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	24-May-2018	24-May-2018	24-May-2018
VOC MS (W)	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Lab Sample No(s)	17564500	17564504	17564509	17564513	17564531	17564536	17564540	17564544	17564552	17564556
Customer Sample Ref.	TP3BF4	TP3BF4	TP3BF4	TP3BF4	TP3BF5	TP3BF5	TP3BF5	TP3BF5	TP3BF6	TP3BF6
AGS Ref.										
Depth	0.50 - 0.50	1.00 - 1.00	2.00 - 2.00	2.50 - 2.50	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	2.00 - 2.00	0.30 - 0.30	0.70 - 0.70
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkali Metals by iCap-OES (Soil)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
Ammoniacal Nitrogen	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018
Ammonium Soil by Titration	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Anions by Kone (soil)	21-May-2018		21-May-2018			21-May-2018		21-May-2018	21-May-2018	
Asbestos ID in Solid Samples	22-May-2018		22-May-2018			22-May-2018		22-May-2018	22-May-2018	
CEN 10:1 Leachate (1 Stage)	22-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018
CEN Readings	24-May-2018	22-May-2018	18-May-2018	22-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	22-May-2018	22-May-2018
Cyanide Comp/Free/Total/Thiocyanate	23-May-2018	23-May-2018	18-May-2018	18-May-2018	23-May-2018	23-May-2018	18-May-2018	18-May-2018	23-May-2018	23-May-2018
Dissolved Metals by ICP-MS	22-May-2018	23-May-2018	23-May-2018	11-Jun-2018	11-Jun-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	23-May-2018
EPH CWG (Aliphatic) Aqueous GC (W)	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
EPH CWG (Aliphatic) GC (S)	25-May-2018	25-May-2018	24-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018	22-May-2018	25-May-2018	24-May-2018
EPH CWG (Aromatic) Aqueous GC (W)	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
EPH CWG (Aromatic) GC (S)	23-May-2018	23-May-2018	24-May-2018	24-May-2018	25-May-2018	25-May-2018	24-May-2018	22-May-2018	24-May-2018	24-May-2018
GRO by GC-FID (S)	23-May-2018	23-May-2018	24-May-2018	24-May-2018	24-May-2018	23-May-2018	24-May-2018	24-May-2018	23-May-2018	24-May-2018
GRO by GC-FID (W)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018
Mercury Dissolved	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Metals in solid samples by OES	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018
PAH by GCMS	24-May-2018	21-May-2018	22-May-2018	23-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018
PAH Spec MS - Aqueous (W)	21-May-2018	23-May-2018	21-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	24-May-2018	24-May-2018
pH	23-May-2018	23-May-2018	22-May-2018	21-May-2018	22-May-2018	23-May-2018	21-May-2018	22-May-2018	23-May-2018	22-May-2018
pH Value	25-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Phenols by HPLC (S)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018
Sample description	16-May-2018	17-May-2018	16-May-2018	16-May-2018	16-May-2018	16-May-2018	16-May-2018	16-May-2018	17-May-2018	16-May-2018
Total Organic Carbon	22-May-2018	22-May-2018	22-May-2018	22-May-2018	23-May-2018	22-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018
Total Sulphate	22-May-2018		23-May-2018			23-May-2018		22-May-2018	22-May-2018	
Total Sulphur	18-May-2018		18-May-2018			23-May-2018		18-May-2018	23-May-2018	
TPH CWG (W)	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
TPH CWG GC (S)	25-May-2018	25-May-2018	24-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018	24-May-2018	25-May-2018	24-May-2018
VOC MS (S)	23-May-2018	24-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018
VOC MS (W)	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018

Lab Sample No(s)	17564560	17564567	17564590	17564594	17564598	17564602	17564612	17564616	17564620	17564663
Customer Sample Ref.	TP3BF6	TP3BF6	TP3BF7	TP3BF7	TP3BF7	TP3BF7	TP3BF8	TP3BF8	TP3BF8	TP3BF1-V
AGS Ref.										
Depth	1.00 - 1.00	1.50 - 1.50	0.50 - 0.50	1.20 - 1.20	1.70 - 1.70	2.30 - 2.30	0.50 - 0.50	1.00 - 1.00	1.50 - 1.50	3.10 - 3.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkali Metals by iCap-OES (Soil)	22-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018		23-May-2018	23-May-2018	23-May-2018	
Ammoniacal Nitrogen	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	
Ammonium Soil by Titration	22-May-2018	22-May-2018	22-May-2018	23-May-2018	23-May-2018		23-May-2018	23-May-2018	22-May-2018	22-May-2018
Anions by Kone (soil)	21-May-2018			21-May-2018			21-May-2018		21-May-2018	
Asbestos ID in Solid Samples	22-May-2018			22-May-2018			22-May-2018		22-May-2018	
CEN 10:1 Leachate (1 Stage)	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	17-May-2018	22-May-2018	
CEN Readings	22-May-2018	22-May-2018	21-May-2018	21-May-2018	22-May-2018	21-May-2018	18-May-2018	18-May-2018	18-May-2018	
Cyanide Comp/Free/Total/Thiocyanate	23-May-2018	23-May-2018	18-May-2018	23-May-2018	18-May-2018		18-May-2018	18-May-2018	23-May-2018	18-May-2018
Dissolved Metals by ICP-MS	23-May-2018	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	23-May-2018	
EPH CWG (Aliphatic) Aqueous GC (W)	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	
EPH CWG (Aliphatic) GC (S)	25-May-2018	24-May-2018	22-May-2018	24-May-2018	25-May-2018		22-May-2018	24-May-2018	25-May-2018	25-May-2018
EPH CWG (Aromatic) Aqueous GC (W)	23-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	
EPH CWG (Aromatic) GC (S)	25-May-2018	24-May-2018	22-May-2018	24-May-2018	25-May-2018		22-May-2018	24-May-2018	25-May-2018	25-May-2018
GRO by GC-FID (S)	23-May-2018	24-May-2018	23-May-2018	24-May-2018	23-May-2018		23-May-2018	24-May-2018	23-May-2018	24-May-2018
GRO by GC-FID (W)	22-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	
Mercury Dissolved	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	
Metals in solid samples by OES	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018		24-May-2018	24-May-2018	24-May-2018	24-May-2018
PAH by GCMS	24-May-2018	23-May-2018	21-May-2018	21-May-2018	21-May-2018		24-May-2018	21-May-2018	23-May-2018	21-May-2018
PAH Spec MS - Aqueous (W)	22-May-2018	24-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	21-May-2018	21-May-2018	21-May-2018	
pH	22-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018		22-May-2018	22-May-2018	23-May-2018	21-May-2018
pH Value	22-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	
Phenols by HPLC (S)	22-May-2018	22-May-2018	21-May-2018	22-May-2018	22-May-2018		21-May-2018	22-May-2018	22-May-2018	22-May-2018
Sample description	16-May-2018	17-May-2018	16-May-2018	16-May-2018	17-May-2018		16-May-2018	17-May-2018	17-May-2018	16-May-2018
Total Organic Carbon	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018		22-May-2018	22-May-2018	22-May-2018	23-May-2018
Total Sulphate	22-May-2018			21-May-2018			22-May-2018		22-May-2018	
Total Sulphur	18-May-2018			21-May-2018			18-May-2018		18-May-2018	
TPH CWG (W)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	22-May-2018	22-May-2018	22-May-2018	
TPH CWG GC (S)	25-May-2018	24-May-2018	23-May-2018	24-May-2018	25-May-2018		23-May-2018	24-May-2018	25-May-2018	25-May-2018
VOC MS (S)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018		23-May-2018	23-May-2018	23-May-2018	23-May-2018
VOC MS (W)	22-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	

Validated

CERTIFICATE OF ANALYSIS

SDG:	180516-60	**Client Reference:**		**Report Number:**	460557
Location:	Llanwern	**Order Number:**	LLA429	**Superseded Report:**	459951

Lab Sample No(s)	17564474	17564496	17564521	17564548	17564608	17564630
Customer Sample Ref.	TP3BF2-V	TP3BF3-V	TP3BF4-V	TP3BF5-V	TP3BF7-V	TP3BF8-V
AGS Ref.						
Depth	2.70 - 2.70	2.20 - 2.20	2.70 - 2.70	2.40 - 2.40	2.70 - 2.70	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Alkali Metals by iCap-OES (Soil)	23-May-2018					
Ammonium Soil by Titration	22-May-2018	22-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018
Cyanide Comp/Free/Total/Thiocyanate	23-May-2018	23-May-2018	18-May-2018	18-May-2018	23-May-2018	18-May-2018
EPH CWG (Aliphatic) GC (S)	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018
EPH CWG (Aromatic) GC (S)	24-May-2018	23-May-2018	24-May-2018	24-May-2018	25-May-2018	25-May-2018
GRO by GC-FID (S)	24-May-2018	23-May-2018	23-May-2018	23-May-2018	24-May-2018	24-May-2018
Metals in solid samples by OES	18-Jun-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018	24-May-2018
PAH by GCMS	24-May-2018	21-May-2018	21-May-2018	21-May-2018	24-May-2018	21-May-2018
pH	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018	21-May-2018
Phenols by HPLC (S)	22-May-2018	22-May-2018	22-May-2018	22-May-2018	22-May-2018	21-May-2018
Sample description	16-May-2018	16-May-2018	16-May-2018	16-May-2018	16-May-2018	16-May-2018
Total Organic Carbon	21-May-2018	23-May-2018	22-May-2018	23-May-2018	23-May-2018	23-May-2018
TPH CWG GC (S)	25-May-2018	25-May-2018	24-May-2018	25-May-2018	25-May-2018	25-May-2018
VOC MS (S)	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018	23-May-2018

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. Samples will be run in duplicate upon request, but an additional charge may be incurred.

3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

6. When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

7. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.

9. NDP - No determination possible due to insufficient/unsuitable sample.

10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals - total metals must be requested separately.

11. Results relate only to the items tested.

12. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

13. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%, they are generally wider for volatiles analysis, 50-150%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

14. **Product analyses** - Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.

15. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).

16. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 15).

17. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

20. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

21. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

23. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

24. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Holding time exceeded before sample received**
5	**Samples exceeded holding time before presevation was performed**
§	**Sampled on date not provided**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to sampled on date**
&	**Sample Holding Time exceeded - Late arrival of instructions.**

Asbestos

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Deeside
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

PRELIMINARY/INTERIM REPORT

Date of report Generation:	22 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210114-154
Your Reference:	P18-669
Location:	Llanwern
Report No:	584152

We received 33 samples on Wednesday January 13, 2021 and 33 of these samples were scheduled for analysis which was completed on Friday January 22, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

This is a preliminary report which has not had final authorisation

Approved By:

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23543943	AO21-1		0.90 - 0.90	11/01/2021
23543949	AO21-2		1.60 - 1.60	11/01/2021
23543955	AO21-3		2.50 - 2.50	11/01/2021
23544156	AP21-1		0.30 - 0.30	11/01/2021
23544165	AP21-2		1.90 - 1.90	11/01/2021
23543938	AP21-3		2.40 - 2.40	11/01/2021
23544143	AQ21-1		0.40 - 0.40	11/01/2021
23544149	AQ21-2		1.90 - 1.90	11/01/2021
23544096	AR21-1		0.30 - 0.30	11/01/2021
23544133	AR21-2		1.20 - 1.20	11/01/2021
23544137	AR21-3		2.00 - 2.00	11/01/2021
23543930	AS20-1		0.40 - 0.40	11/01/2021
23544000	AS20-2		1.70 - 1.70	11/01/2021
23543960	AT20-1		0.30 - 0.30	12/01/2021
23543966	AT20-2		1.00 - 1.00	12/01/2021
23544071	AT21-1		0.30 - 0.30	12/01/2021
23544080	AT21-2		1.90 - 1.90	12/01/2021
23544090	AT22-1		0.40 - 0.40	12/01/2021
23544110	AT22-2		1.00 - 1.00	12/01/2021
23544114	AT22-3		2.50 - 2.50	12/01/2021
23543974	AU20-1		0.40 - 0.40	12/01/2021
23543980	AU20-2		1.60 - 1.60	12/01/2021
23544054	AU21-1		0.40 - 0.40	12/01/2021
23544062	AU21-2		1.50 - 1.50	12/01/2021
23544119	AU22-1		0.50 - 0.50	12/01/2021
23544127	AU22-2		1.40 - 1.40	12/01/2021
23543984	AV20-1		0.50 - 0.50	12/01/2021
23544032	AV21-1		0.40 - 0.40	12/01/2021
23544041	AV21-2		1.60 - 1.60	12/01/2021
23543990	AW20-1		0.30 - 0.30	12/01/2021
23544006	AW20-2		2.00 - 2.00	12/01/2021
23544014	AW21-1		0.50 - 0.50	12/01/2021
23544023	AW21-2		1.50 - 1.50	12/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	23543930		23543960		23543974		23543984		23543990		23544000		23543966		23543980
			Customer Sample Reference	AS20-1		AT20-1		AU20-1		AV20-1		AW20-1		AS20-2		AT20-2		AU20-2
			AGS Reference															
			Depth (m)	0.40 - 0.40		0.30 - 0.30		0.40 - 0.40		0.50 - 0.50		0.30 - 0.30		1.70 - 1.70		1.00 - 1.00		1.60 - 1.60
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17		X									X					X		X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4											X							X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33				X		X		X		X		X		X		X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
PAH by GCMS	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
pH	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33			X		X		X			X			X		X		X	
Sample description	All	NDPs: 0 Tests: 32			X		X		X		X				X		X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 33			X		X		X		X				X		X		X	
VOC MS (S)	All	NDPs: 0 Tests: 33				X		X		X			X		X			X		

23543938	AP21-3		2.40 - 2.40	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S										X				
				1kg TUB with Handle (ALE260)	S	X			X	X		X	X	X		X	X	X	
23543955	AO21-3		2.50 - 2.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23544023	AW21-2		1.50 - 1.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23543949	AO21-2		1.60 - 1.60	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X		X	X	
23544014	AW21-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S										X				
				1kg TUB with Handle (ALE260)	S	X	X		X	X		X	X	X		X	X	X	
23544032	AV21-1		0.40 - 0.40	1kg TUB with Handle (ALE260)	S		X												
23543943	AO21-1		0.90 - 0.90	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23544006	AW20-2		2.00 - 2.00	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23543980	AU20-2		1.60 - 1.60	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23544156	23544143		23544096			23544071			23544054		23544032			23544149		23544133	
Customer Sample Reference			AP21-1	AQ21-1		AR21-1			AT21-1			AU21-1		AV21-1			AQ21-2		AR21-2	
AGS Reference																					
Depth (m)			0.30 - 0.30	0.40 - 0.40		0.30 - 0.30			0.30 - 0.30			0.40 - 0.40		0.40 - 0.40			1.90 - 1.90		1.20 - 1.20	
Container			250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17				X			X			X					X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4							X												
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33			X			X			X			X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
pH	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Sample description	All	NDPs: 0 Tests: 32	X	X			X			X			X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 33			X			X			X			X		X			X		X

23544114	AT22-3		2.50 - 2.50	60g VOC (ALE215)	S		
				250g Amber Jar (ALE210)	S		X
				1kg TUB with Handle (ALE260)	S		
				60g VOC (ALE215)	S	X	
23544127	AU22-2		1.40 - 1.40	250g Amber Jar (ALE210)	S		X
				1kg TUB with Handle (ALE260)	S		
				60g VOC (ALE215)	S		X
23544110	AT22-2		1.00 - 1.00	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S	X	
23544119	AU22-1		0.50 - 0.50	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S		
23544090	AT22-1		0.40 - 0.40	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S		
23544137	AR21-3		2.00 - 2.00	250g Amber Jar (ALE210)	S		X
				1kg TUB with Handle (ALE260)	S		
				60g VOC (ALE215)	S		
23544041	AV21-2		1.60 - 1.60	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S		
23544062	AU21-2		1.50 - 1.50	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S		
23544080	AT21-2		1.90 - 1.90	250g Amber Jar (ALE210)	S		X
				60g VOC (ALE215)	S	X	

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23544156			23544165
Customer Sample Reference			AP21-1			AP21-2
AGS Reference						
Depth (m)			0.30 - 0.30			1.90 - 1.90
Container			60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17		X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4		X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 33			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33	X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 33			X	
PAH by GCMS	All	NDPs: 0 Tests: 33			X	
pH	All	NDPs: 0 Tests: 33			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33			X	
Sample description	All	NDPs: 0 Tests: 32			X	
Total Organic Carbon	All	NDPs: 0 Tests: 33			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 33			X	
VOC MS (S)	All	NDPs: 0 Tests: 33	X			X

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23543943	AO21-1	0.90 - 0.90	Dark Brown	Sandy Loam	Stones	None
23543949	AO21-2	1.60 - 1.60	Dark Brown	Sandy Loam	Stones	N/A
23543955	AO21-3	2.50 - 2.50	Dark Brown	Sand	Stones	Brick
23544156	AP21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	Vegetation
23544165	AP21-2	1.90 - 1.90	Dark Brown	Sandy Loam	Stones	None
23543938	AP21-3	2.40 - 2.40	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23544143	AQ21-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23544149	AQ21-2	1.90 - 1.90	Dark Brown	Sandy Loam	Stones	N/A
23544096	AR21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23544133	AR21-2	1.20 - 1.20	Black	Sand	Stones	None
23544137	AR21-3	2.00 - 2.00	Dark Brown	Sand	Brick	Stones
23543930	AS20-1	0.40 - 0.40	Dark Brown	Loamy Sand	Stones	None
23544000	AS20-2	1.70 - 1.70	Light Brown	Sand	Stones	Brick
23543960	AT20-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	N/A
23543966	AT20-2	1.00 - 1.00	Dark Brown	Sand	Stones	None
23544071	AT21-1	0.30 - 0.30	Dark Brown	Sand	None	Stones
23544080	AT21-2	1.90 - 1.90	Dark Brown	N/A	Vegetation	Stones
23544090	AT22-1	0.40 - 0.40	Dark Brown	Sand	Stones	None
23544110	AT22-2	1.00 - 1.00	Dark Brown	Stone/Soil	None	Stones
23544114	AT22-3	2.50 - 2.50	Dark Brown	N/A	Stones	None
23543974	AU20-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23543980	AU20-2	1.60 - 1.60	Dark Brown	Loamy Sand	Stones	None
23544054	AU21-1	0.40 - 0.40	Dark Brown	Sand	None	Stones
23544062	AU21-2	1.50 - 1.50	Dark Brown	N/A	Stones	None
23544119	AU22-1	0.50 - 0.50	Dark Brown	Sand	None	Stones
23544127	AU22-2	1.40 - 1.40	Dark Brown	N/A	Stones	None
23543984	AV20-1	0.50 - 0.50	Dark Brown	Loamy Sand	Brick	Stones
23544032	AV21-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23544041	AV21-2	1.60 - 1.60	Dark Brown	Sand	Vegetation	Stones
23543990	AW20-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23544006	AW20-2	2.00 - 2.00	Dark Brown	N/A	None	Stones
23544014	AW21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Vegetation
23544023	AW21-2	1.50 - 1.50	Dark Brown	Sand	None	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	13	10	10	8.1	20
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	74.1 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0504 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0126 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	0.0378 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	0.101 M
Soil Organic Matter (SOM)	<0.35 %	TM132		9.26 #	3.43 #	3.03 #	17.8 #	3.36 #	7.43 #
pH	1 pH Units	TM133		11.5 M	11.5 M	11.7 M	9.83 M	9.93 M	9.49 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.31 M	<1 M	3.93 M	1.16 M
Arsenic	<0.6 mg/kg	TM181		12.1 M	12.3 M	7.92 M	6.21 M	35.7 M	16.9 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.0685 M	0.108 M	1.55 M	<0.2 M	0.413 M
Chromium	<0.9 mg/kg	TM181		<9 M	21.7 M	16.9 M	49.5 M	<9 M	9.75 M
Copper	<1.4 mg/kg	TM181		15.8 M	22.4 M	38.1 M	30.7 M	20.2 M	25.4 M
Iron	<1000 mg/kg	TM181		171000 #	49700 #	35000 #	305000 #	374000 #	82600 #
Lead	<0.7 mg/kg	TM181		115 M	27.5 M	19.5 M	150 M	94.3 M	36.4 M
Manganese	<0.13 mg/kg	TM181		2040 M	1720 M	707 M	6190 M	7060 M	2000 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<0.14 M	<0.14 M	2.18 M	1.89 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		48.7 M	19.9 M	21.4 M	60.4 M	37.9 M	30.1 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<1 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		33.9 #	51 #	20.7 #	208 #	122 #	82 #
Zinc	<1.9 mg/kg	TM181		146 M	76 M	64.2 M	564 M	159 M	68.8 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						incomplete #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						incomplete #	
Additional Asbestos Components (Using TM048)		TM304						incomplete #	
Analysts Comments		TM304						incomplete	
Asbestos Quantification - Total - %	<0.001 %	TM304						incomplete #	

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	16	13	11	11	7.1
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		12.9 #	4.21 #	15.5 #	18.1 #	4.05 #	2.93 #
pH	1 pH Units	TM133		9.35 M	9.8 M	10 M	10.2 M	10.7 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		3.73 M	<1 M	1.43 M	9.2 M	<1 M	3.58 M
Arsenic	<0.6 mg/kg	TM181		16.7 M	14 M	12.6 M	12.6 M	8.74 M	14.3 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	<0.2 M	0.437 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		<9 M	<9 M	<9 M	74.3 M	<9 M	<9 M
Copper	<1.4 mg/kg	TM181		31.6 M	21.5 M	23.1 M	40.5 M	19.4 M	19.1 M
Iron	<1000 mg/kg	TM181		230000 #	185000 #	223000 #	211000 #	100000 #	159000 #
Lead	<0.7 mg/kg	TM181		160 M	110 M	98.9 M	117 M	30.8 M	100 M
Manganese	<0.13 mg/kg	TM181		4830 M	3160 M	6220 M	9100 M	3640 M	2900 M
Mercury	<0.14 mg/kg	TM181		2.56 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		58.4 M	35 M	57.9 M	71.6 M	54.7 M	36.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		88.4 #	72.2 #	77.7 #	176 #	48 #	51.2 #
Zinc	<1.9 mg/kg	TM181		483 M	347 M	237 M	314 M	165 M	172 M

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		6.6	11	9.8	11	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.76 #	0.426 #	>100 #	4.33 #	3.45	73.8 #
pH	1 pH Units	TM133		11.9 M	11.5 M	10.4 M	11.1 M	11.1	9.11 M
Cyanide, Total	<1 mg/kg	TM153		2.2 M	<1 M	<1 M	<1 M	1.63	<1 M
Arsenic	<0.6 mg/kg	TM181		11.4 M	33.2 M	<6 M	14 M	7.8	13 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.2 M	<0.2 M	<0.2 M	0.357	<0.2 M
Chromium	<0.9 mg/kg	TM181		17.3 M	<9 M	<9 M	<9 M	11.8	<9 M
Copper	<1.4 mg/kg	TM181		34.2 M	75.5 M	<14 M	17.6 M	15.2	22.7 M
Iron	<1000 mg/kg	TM181		44100 #	360000 #	42500 #	208000 #	87000	234000 #
Lead	<0.7 mg/kg	TM181		26.2 M	77.7 M	15.7 M	63.5 M	29.1	45.8 M
Manganese	<0.13 mg/kg	TM181		1690 M	5610 M	767 M	3230 M	2750	5060 M
Mercury	<0.14 mg/kg	TM181		0.164 M	<1.4 M	<1.4 M	<1.4 M	<1.4	<1.4 M
Nickel	<0.2 mg/kg	TM181		14.6 M	93.4 M	8.38 M	39.7 M	22.4	48.8 M
Selenium	<1 mg/kg	TM181		<1 #	<10 #	<10 #	<10 #	<10	<10 #
Vanadium	<0.2 mg/kg	TM181		28.9 #	62.9 #	12 #	55.2 #	54.6	181 #
Zinc	<1.9 mg/kg	TM181		129 M	194 M	45.6 M	144 M	116	194 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					incomplete #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					incomplete #		
Additional Asbestos Components (Using TM048)		TM304					incomplete #		
Analysts Comments		TM304					incomplete		
Asbestos Quantification - Total - %	<0.001 %	TM304					incomplete #		

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	4.3	10	8.8	7.3	7.3
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 #	<12	<12 M	<12 M	<12 M	<12
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01	<0.01 M	<0.01 M	<0.01 M	<0.01
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01	<0.01 M	0.011 M	<0.01 M	<0.01
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015	<0.015 M	<0.015 M	<0.015 M	<0.015
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035	<0.035 M	<0.035 M	<0.035 M	<0.035
Soil Organic Matter (SOM)	<0.35 %	TM132		<0.35 #	1.64	4.19 #	5.05 #	9.91 #	4.29
pH	1 pH Units	TM133		11.7 #	11.1	11.5 M	10.7 M	10.2 M	10.5
Cyanide, Total	<1 mg/kg	TM153		3.98 #	<1	<1 M	<1 M	<1 M	<1
Arsenic	<0.6 mg/kg	TM181		<6 #	<6	13 M	8.46 M	12.2 M	10.2
Cadmium	<0.02 mg/kg	TM181		<0.2 #	<0.2	<0.2 M	0.997 M	1.42 M	1.39
Chromium	<0.9 mg/kg	TM181		615 #	<9	10.7 M	55.3 M	40.7 M	<9
Copper	<1.4 mg/kg	TM181		16.5 #	<14	24.4 M	25.7 M	18.4 M	<14
Iron	<1000 mg/kg	TM181		188000 #	193000	113000 #	199000 #	281000 #	197000
Lead	<0.7 mg/kg	TM181		11 #	7.9	56.7 M	80.1 M	27.1 M	12.5
Manganese	<0.13 mg/kg	TM181		48600 #	3050	3420 M	4960 M	5850 M	3220
Mercury	<0.14 mg/kg	TM181		<1.4 #	<1.4	<1.4 M	<1.4 M	<1.4 M	<1.4
Nickel	<0.2 mg/kg	TM181		12.4 #	46.2	41.9 M	37.6 M	35.5 M	22.8
Selenium	<1 mg/kg	TM181		35.1 #	<10	<10 #	<10 #	<10 #	<10
Vanadium	<0.2 mg/kg	TM181		592 #	190	52.5 #	81.7 #	64 #	64.5
Zinc	<1.9 mg/kg	TM181		45.6 #	158	98.2 M	236 M	316 M	105
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					incomplete #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					incomplete #		
Additional Asbestos Components (Using TM048)		TM304					incomplete #		
Analysts Comments		TM304					incomplete		
Asbestos Quantification - Total - %	<0.001 %	TM304					incomplete #		

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	5.8	9.9	9.3	19	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12	<12 M	<12 M	25.8 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0116 M	<0.01 #	<0.01 M	<0.01 M	0.0124 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		30.5 #	8.05	3.76 #	11.4 #	5.07 #	7.78 #
pH	1 pH Units	TM133		11.4 M	10	11.2 M	10.5 M	10.9 M	9.12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1	<1 M	1.62 M	<1 M	2.98 M
Arsenic	<0.6 mg/kg	TM181		10.1 M	9.84	7.97 M	22.5 M	10.8 M	16 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2	1.63 M	<0.2 M	<0.2 M	0.636 M
Chromium	<0.9 mg/kg	TM181		213 M	35	91.4 M	<9 M	85 M	109 M
Copper	<1.4 mg/kg	TM181		<14 M	14.9	20.9 M	27.4 M	21.5 M	42.2 M
Iron	<1000 mg/kg	TM181		123000 #	96000	207000 #	325000 #	48000 #	144000 #
Lead	<0.7 mg/kg	TM181		55.3 M	46.5	145 M	89.5 M	31.8 M	296 M
Manganese	<0.13 mg/kg	TM181		2330 M	4160	8540 M	6800 M	6510 M	8550 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4	<1.4 M	1.56 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		33.1 M	18	25.3 M	68.5 M	18.7 M	42.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		37.3 #	126	88.5 #	89.1 #	142 #	173 #
Zinc	<1.9 mg/kg	TM181		107 M	168	641 M	272 M	116 M	897 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							incomplete #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							incomplete #
Additional Asbestos Components (Using TM048)		TM304							incomplete #
Analysts Comments		TM304							incomplete
Asbestos Quantification - Total - %	<0.001 %	TM304							incomplete #

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.7	7.4	20			
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12	<12 M	<12 M			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		1.17	6 #	1.79 #			
pH	1 pH Units	TM133		10.4	11.4 M	11.5 M			
Cyanide, Total	<1 mg/kg	TM153		<1	4.14 M	11.2 M			
Arsenic	<0.6 mg/kg	TM181		8.02	8.04 M	14.3 M			
Cadmium	<0.02 mg/kg	TM181		<0.2	0.642 M	<0.2 M			
Chromium	<0.9 mg/kg	TM181		<9	32.3 M	<9 M			
Copper	<1.4 mg/kg	TM181		15	22.5 M	15.7 M			
Iron	<1000 mg/kg	TM181		120000	141000 #	216000 #			
Lead	<0.7 mg/kg	TM181		19.7	29.4 M	42.2 M			
Manganese	<0.13 mg/kg	TM181		3070	2700 M	5540 M			
Mercury	<0.14 mg/kg	TM181		<1.4	<1.4 M	3.44 M			
Nickel	<0.2 mg/kg	TM181		27.5	52.9 M	29.7 M			
Selenium	<1 mg/kg	TM181		<10	<10 #	<10 #			
Vanadium	<0.2 mg/kg	TM181		52.9	31.1 #	61.1 #			
Zinc	<1.9 mg/kg	TM181		79.7	119 M	161 M			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.5	91.6	85.3	84.2	89.3	90.4
Acenaphthene-d10 % recovery**	%	TM218		85.5	87.9	82	87.1	88.4	86.2
Phenanthrene-d10 % recovery**	%	TM218		89.7	88.3	81.2	92.4	88.4	84
Chrysene-d12 % recovery**	%	TM218		86.3	113	73.6	88.5	89.4	73.4
Perylene-d12 % recovery**	%	TM218		72.1	120	71.9	72.3	86.1	67.3
Naphthalene	<9 µg/kg	TM218		328 M	274 M	267 M	267 M	26.3 M	77.4 M
Acenaphthylene	<12 µg/kg	TM218		122 M	179 M	<12 M	104 M	<12 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<40 M	<16 M	<8 M	14.4 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		140 M	57 M	13.8 M	78.8 M	13.8 M	<10 M
Phenanthrene	<15 µg/kg	TM218		590 M	490 M	92.9 M	760 M	58.3 M	93.1 M
Anthracene	<16 µg/kg	TM218		152 M	247 M	<16 M	196 M	<16 M	<16 M
Fluoranthene	<17 µg/kg	TM218		593 M	1170 M	54.3 M	1330 M	42.3 M	110 M
Pyrene	<15 µg/kg	TM218		447 M	838 M	41 M	1030 M	44.6 M	79.8 M
Benz(a)anthracene	<14 µg/kg	TM218		228 M	721 M	23.3 M	653 M	22.8 M	51.3 M
Chrysene	<10 µg/kg	TM218		268 M	611 M	29.8 M	622 M	30.6 M	52.2 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		294 M	1020 M	33.6 M	901 M	49.3 M	65.7 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		99.4 M	347 M	<14 M	286 M	<14 M	21.8 M
Benzo(a)pyrene	<15 µg/kg	TM218		166 M	667 M	<15 M	527 M	21.9 M	37 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		160 M	539 M	<18 M	485 M	24.2 M	30.6 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<115 M	119 M	<23 M	97.9 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<120 M	480 M	<24 M	411 M	<24 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3590	7760	556	7770	334	619

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.2	87.9	83.8	84.7	88.9	85.8
Acenaphthene-d10 % recovery**	%	TM218		87.1	85.7	82.9	82.8	87.1	90.8
Phenanthrene-d10 % recovery**	%	TM218		84.4	84.4	82.9	83.5	84.6	97.5
Chrysene-d12 % recovery**	%	TM218		78.6	87.2	91.2	77.4	75.5	93.6
Perylene-d12 % recovery**	%	TM218		74.7	84.1	88.3	73.5	72.4	86.2
Naphthalene	<9 µg/kg	TM218		145 M	24.6 M	125 M	209 M	26.3 M	163 M
Acenaphthylene	<12 µg/kg	TM218		43.8 M	<12 M	40.7 M	73.8 M	<12 M	32.4 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	11.6 M	34.4 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		27.2 M	<10 M	21.5 M	54.9 M	<10 M	26.3 M
Phenanthrene	<15 µg/kg	TM218		275 M	29.7 M	413 M	1790 M	53 M	186 M
Anthracene	<16 µg/kg	TM218		70.5 M	<16 M	94.6 M	398 M	<16 M	48.8 M
Fluoranthene	<17 µg/kg	TM218		399 M	30.7 M	849 M	3420 M	91 M	346 M
Pyrene	<15 µg/kg	TM218		313 M	26.1 M	635 M	2410 M	71.3 M	295 M
Benz(a)anthracene	<14 µg/kg	TM218		230 M	20.3 M	441 M	1400 M	41.6 M	185 M
Chrysene	<10 µg/kg	TM218		226 M	22.8 M	427 M	1290 M	45.6 M	199 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		454 M	31.6 M	740 M	1870 M	59.8 M	245 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		126 M	<14 M	246 M	538 M	19 M	85.7 M
Benzo(a)pyrene	<15 µg/kg	TM218		241 M	18.1 M	438 M	1260 M	37 M	137 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		232 M	<18 M	422 M	975 M	36.6 M	110 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		48.2 M	<23 M	87.1 M	218 M	<23 M	28.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		211 M	<24 M	392 M	933 M	32.8 M	114 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3040	204	5380	16900	514	2200

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.3	86.1	92.6	92.2	90.5	87.1
Acenaphthene-d10 % recovery**	%	TM218		88.1	83.3	89.3	87.7	86.3	86
Phenanthrene-d10 % recovery**	%	TM218		94.3	81.6	81	83.8	84.6	80.3
Chrysene-d12 % recovery**	%	TM218		93.8	72.9	56.6	76.2	79.9	66.6
Perylene-d12 % recovery**	%	TM218		88.2	70.3	44.6	79.2	79.6	53
Naphthalene	<9 µg/kg	TM218		65.7 M	44.1 M	74.5 M	141 M	24.7	71.9 M
Acenaphthylene	<12 µg/kg	TM218		15 M	<12 M	<12 M	59 M	<12	38.9 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	9.58 M	<8	10.8 M
Fluorene	<10 µg/kg	TM218		11.5 M	<10 M	26.8 M	39.3 M	<10	23.8 M
Phenanthrene	<15 µg/kg	TM218		85.3 M	53.1 M	244 M	324 M	17	298 M
Anthracene	<16 µg/kg	TM218		19 M	<16 M	38.1 M	82.5 M	<16	72.4 M
Fluoranthene	<17 µg/kg	TM218		192 M	52 M	72.1 M	540 M	<17	426 M
Pyrene	<15 µg/kg	TM218		161 M	43.7 M	84.1 M	389 M	<15	371 M
Benz(a)anthracene	<14 µg/kg	TM218		113 M	26.3 M	55.6 M	239 M	<14	246 M
Chrysene	<10 µg/kg	TM218		112 M	36.1 M	83.5 M	242 M	12.5	240 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		185 M	45.7 M	73.9 M	374 M	<15	283 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		63.1 M	<14 M	23.6 M	114 M	<14	110 M
Benzo(a)pyrene	<15 µg/kg	TM218		107 M	22.1 M	36.2 M	229 M	<15	241 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		90.5 M	23.1 M	23.2 M	199 M	<18	175 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	37.1 M	<23	49.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		90.4 M	<24 M	32 M	173 M	<24	210 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1310	346	867	3190	<118	2870

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.9	87.3	87.4	88.7	89.4	89.6
Acenaphthene-d10 % recovery**	%	TM218		86.4	88.3	85.5	89.5	87.4	86.4
Phenanthrene-d10 % recovery**	%	TM218		89.3	91.5	84.2	93.1	89	85.3
Chrysene-d12 % recovery**	%	TM218		84.7	88.5	76	90.7	78.2	78.6
Perylene-d12 % recovery**	%	TM218		84	82.9	73.6	82.1	70.9	76
Naphthalene	<9 µg/kg	TM218		14.1 #	145	40.8 M	28.4 M	63 M	55.3
Acenaphthylene	<12 µg/kg	TM218		<12 #	<12	27.2 M	<12 M	33.7 M	<12
Acenaphthene	<8 µg/kg	TM218		<8 #	9.7	<8 M	<8 M	9.75 M	<8
Fluorene	<10 µg/kg	TM218		<10 #	10.5	<10 M	<10 M	16.1 M	11.2
Phenanthrene	<15 µg/kg	TM218		92.1 #	23.7	112 M	63.9 M	180 M	78.6
Anthracene	<16 µg/kg	TM218		<16 #	<16	30 M	<16 M	43.9 M	<16
Fluoranthene	<17 µg/kg	TM218		117 #	20.3	197 M	84.7 M	307 M	98.3
Pyrene	<15 µg/kg	TM218		189 #	17.9	183 M	70.4 M	253 M	77
Benz(a)anthracene	<14 µg/kg	TM218		116 #	<14	121 M	47.8 M	169 M	47.5
Chrysene	<10 µg/kg	TM218		141 #	<10	154 M	51.7 M	174 M	50.7
Benzo(b)fluoranthene	<15 µg/kg	TM218		313 #	<15	163 M	81.5 M	303 M	53.4
Benzo(k)fluoranthene	<14 µg/kg	TM218		114 #	<14	69.8 M	27.3 M	87.9 M	21.1
Benzo(a)pyrene	<15 µg/kg	TM218		230 #	<15	147 M	43.4 M	164 M	41
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		289 #	<18	146 M	40.4 M	147 M	37.5
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		60.5 #	<23	28 M	<23 M	28.7 M	<23
Benzo(g,h,i)perylene	<24 µg/kg	TM218		306 #	<24	153 M	44.4 M	136 M	39
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1980	227	1570	584	2110	611

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.5	86.8	88.7	89.7	86.5	85.1
Acenaphthene-d10 % recovery**	%	TM218		81.5	85.9	87.6	85.4	84.4	86.2
Phenanthrene-d10 % recovery**	%	TM218		76.5	82.7	85.2	85.4	83	91.2
Chrysene-d12 % recovery**	%	TM218		73.5	73.1	79	104	75	86.4
Perylene-d12 % recovery**	%	TM218		72	70.8	74.4	100	72.6	76.5
Naphthalene	<9 µg/kg	TM218		<450 M	43.2	53.7 M	64.5 M	30 M	79.6 M
Acenaphthylene	<12 µg/kg	TM218		<600 M	<12	38 M	31.4 M	<12 M	113 M
Acenaphthene	<8 µg/kg	TM218		<400 M	<8	9.29 M	<16 M	<8 M	<40 M
Fluorene	<10 µg/kg	TM218		<500 M	<10	17.6 M	<20 M	<10 M	168 M
Phenanthrene	<15 µg/kg	TM218		<750 M	62	194 M	123 M	102 M	1430 M
Anthracene	<16 µg/kg	TM218		<800 M	<16	43.4 M	<32 M	<16 M	295 M
Fluoranthene	<17 µg/kg	TM218		<850 M	49.7	385 M	225 M	149 M	2320 M
Pyrene	<15 µg/kg	TM218		<750 M	40.2	331 M	194 M	116 M	1630 M
Benz(a)anthracene	<14 µg/kg	TM218		<700 M	24.9	212 M	150 M	69.2 M	883 M
Chrysene	<10 µg/kg	TM218		<500 M	36.5	249 M	162 M	84.5 M	637 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<750 M	46.5	288 M	297 M	110 M	1120 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<700 M	<14	120 M	94.2 M	38.5 M	422 M
Benzo(a)pyrene	<15 µg/kg	TM218		<750 M	21.8	240 M	143 M	55.8 M	657 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<900 M	22.2	228 M	171 M	47.4 M	528 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<1150 M	<23	46.6 M	<46 M	<23 M	<115 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<1200 M	<24	227 M	160 M	48.9 M	481 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<5900	347	2680	1810	851	10800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.5	88	93.4			
Acenaphthene-d10 % recovery**	%	TM218		88.2	87	90.3			
Phenanthrene-d10 % recovery**	%	TM218		88.8	85	89.6			
Chrysene-d12 % recovery**	%	TM218		91.7	79.5	85			
Perylene-d12 % recovery**	%	TM218		94	72	87.5			
Naphthalene	<9 µg/kg	TM218		157 #	<450 M	1010 M			
Acenaphthylene	<12 µg/kg	TM218		<12 #	<600 M	927 M			
Acenaphthene	<8 µg/kg	TM218		<8 #	<400 M	101 M			
Fluorene	<10 µg/kg	TM218		11 #	<500 M	458 M			
Phenanthrene	<15 µg/kg	TM218		47.5 #	<750 M	1250 M			
Anthracene	<16 µg/kg	TM218		<16 #	<800 M	457 M			
Fluoranthene	<17 µg/kg	TM218		44.6 #	<850 M	2810 M			
Pyrene	<15 µg/kg	TM218		37.9 #	<750 M	2750 M			
Benz(a)anthracene	<14 µg/kg	TM218		26.9 #	<700 M	2040 M			
Chrysene	<10 µg/kg	TM218		26.4 #	<500 M	2030 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		44.6 #	<750 M	4200 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 #	<700 M	1180 M			
Benzo(a)pyrene	<15 µg/kg	TM218		22.1 #	<750 M	2590 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		25 #	<900 M	2400 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 #	<1150 M	469 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 #	<1200 M	2010 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		443	<5900	26700			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		91.1	94.1	112	104	100	89.1
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	11.4	<10	<10	<10	11.3
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	68.4	31.4	<10	<10	44.1
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	833	175	<10	<10	208
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1660	1090
Aliphatics >C16-C21	<1000 µg/kg	TM414		15600	2510	2640	6160	17800	2540
Aliphatics >C21-C35	<1000 µg/kg	TM414		106000	19900	19300	15700	84400	9790
Aliphatics >C35-C44	<1000 µg/kg	TM414		65600	13400	7480	2840	37000	1680
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		189000	36000	29500	25100	141000	15300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		231000	48100	36600	45200	156000	384000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	26.2	16.8	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	555	116	<10	<10	139
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	9660
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1990	<1000	<1000	2350	2200	117000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		37000	8680	5040	16100	11400	217000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2770	1810	<1000	<1000	1000	24500
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	4560
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		42600	12100	7070	20100	15300	368000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		231000	49600	36900	45200	156000	384000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	913	206	<50	<50	263
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	581	133	<50	<50	139
GRO >C5-C10	<20 µg/kg	TM089		<20	1490	339	<20	<20	402

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78.5	104	108	99.2	87.5	86.1
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	15.5	12.7	22.4	13.4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	28.6	20.7	29.1	22.4	10.8
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	2470	4040
Aliphatics >C16-C21	<1000 µg/kg	TM414		7110	1110	4980	10500	4480	95300
Aliphatics >C21-C35	<1000 µg/kg	TM414		11000	5210	22100	157000	17300	171000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	6460	41400	1300	61400
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		19200	7160	34100	211000	25500	332000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		46800	12400	70500	288000	53000	361000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	19	13.8	20.2	15.7	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1390	<1000	1860	7300	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		20400	3940	32500	67500	25800	27300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		5600	<1000	1880	2560	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		27600	5220	36400	77700	27400	29300
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		46800	12400	70600	288000	53000	361000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	51.5	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	51.5	<20	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
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**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		105	84.5	68.8 4	84.3	88.4	55.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	11.1	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	17.8	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	1710	<1000	7390	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		9070	2940	3660	1140	7000	1460
Aliphatics >C21-C35	<1000 µg/kg	TM414		30700	60800	18200	18200	13600	6260
Aliphatics >C35-C44	<1000 µg/kg	TM414		21600	33300	2750	7650	6570	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		62000	97000	26500	27000	34500	8130
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		74900	114000	49100	42000	46200	29000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	12.2	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	1380	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	5680	2130	<1000	4460
Aromatics > EC21-EC35	<1000 µg/kg	TM414		11400	15200	14400	11800	9900	14900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1130	<1000	<1000	1350	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		12900	16800	22700	15000	11600	20900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		74900	114000	49100	42000	46200	29000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20 4

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		110	94.8	83.8	71.5	73.2	91.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	29.3	<10	11	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		14.7	57.5	<10	20.8	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		3830	2110	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		13200	4930	2640	2260	3200	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		9790	8620	31400	30800	16600	5530
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	19400	23900	4250	1220
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		26800	15700	53400	57100	24100	7490
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		28700	21400	65600	75500	43600	17700
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		10.2	38.7	<10	13.2	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	2850	10600	16500	17200	8640
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1260	1640	1190
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	5670	12200	18300	19500	10200
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		26800	21500	65600	75500	43600	17700
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	86.7	<50	31.8	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	86.7	<20	31.8	<20	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		106	95.5	93.5	70.3	107	86.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	24.8	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	18.9	<10	73.2	14.3
Aliphatics >C8-C10	<10 µg/kg	TM089		17.4	<10	33.3	<10	95.5	22.6
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1160	<1000	<1000	<1000	3830	3200
Aliphatics >C16-C21	<1000 µg/kg	TM414		26400	1240	5880	2960	7570	23400
Aliphatics >C21-C35	<1000 µg/kg	TM414		221000	6590	56000	43000	22300	33500
Aliphatics >C35-C44	<1000 µg/kg	TM414		41300	<1000	13600	14900	4700	8110
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		290000	8050	75800	61000	38700	68700
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		335000	11600	94900	76200	45300	123000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		11.6	<10	22.2	<10	64.5	15.5
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	2550
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	1160	<1000	<1000	3070
Aromatics > EC21-EC35	<1000 µg/kg	TM414		42000	2010	16500	13100	4840	39100
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2260	<1000	1220	1380	<1000	9860
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	3240
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		45200	<5000	19100	15200	6570	54600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		335000	<10000	94900	76200	45500	123000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	52.2	<50	193	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	64.5	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	52.2	<20	258	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		90.3	83.1	100			
Aliphatics >C5-C6	<10 µg/kg	TM089		3.18	<10	16.4			
Aliphatics >C6-C8	<10 µg/kg	TM089		10.6	<10	88.2			
Aliphatics >C8-C10	<10 µg/kg	TM089		23.3	<10	186			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	2310	55400			
Aliphatics >C16-C21	<1000 µg/kg	TM414		3260	21400	193000			
Aliphatics >C21-C35	<1000 µg/kg	TM414		56100	14700	16800			
Aliphatics >C35-C44	<1000 µg/kg	TM414		27600	2410	2190			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		87100	40900	267000			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		111000	87700	427000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/kg	TM089		15.9	<10	125			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	1950			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1810	31700			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	5590	80300			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		21700	27600	40600			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1440	11300	4640			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1710	<1000			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23500	46800	159000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		111000	87700	427000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	291			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	125			
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	416			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Dibromofluoromethane**	%	TM116		107	106	108	101	105	111
Toluene-d8**	%	TM116		96.9	97.7	96.1	94.5	97	95.4
4-Bromofluorobenzene**	%	TM116		94.3	91	91.2	83.6	92.4	87.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	115	108	105	111	108
Toluene-d8**	%	TM116		98.2	99.6	96.6	96.5	96.8	95.4
4-Bromofluorobenzene**	%	TM116		95.5	97.7	93.2	86.3	93.7	93.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Dibromofluoromethane**	%	TM116		110	109	110	108	108	106
Toluene-d8**	%	TM116		97.7	95.9	94	97.3	97.8	100
4-Bromofluorobenzene**	%	TM116		96.1	90.6	86.7	96.4	95.1	88.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 #	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 #	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 #	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 #	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 #	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 #	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	116	108	110	111	108
Toluene-d8**	%	TM116		98.9	97.3	97.4	96.2	96.2	97.3
4-Bromofluorobenzene**	%	TM116		100	95.8	89.5	88.6	89.9	90.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 #	<200 #	<200 M	<200 M	<200 M	<200
Benzene	<9 µg/kg	TM116		<180 #	<180 #	<180 M	<180 M	<180 M	<180
Toluene	<7 µg/kg	TM116		<140 #	<140 #	<140 M	<140 M	<140 M	<140
Ethylbenzene	<4 µg/kg	TM116		<80 #	<80 #	<80 M	<80 M	<80 M	<80
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200
o-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 M	<200 M	<200 M	<200
Naphthalene	<13 µg/kg	TM116		<260 #	<260 #	<260 M	<260 M	<260 M	<260
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Dibromofluoromethane**	%	TM116		109	113	106	106	104	113
Toluene-d8**	%	TM116		95.5	97.5	96.1	98	96	97
4-Bromofluorobenzene**	%	TM116		88.8	97	93.1	91.7	92.1	90.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	109	105			
Toluene-d8**	%	TM116		96.8	96.4	97.3			
4-Bromofluorobenzene**	%	TM116		94.7	91.1	95.1			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200	<200 M	<200 M			
Benzene	<9 µg/kg	TM116		<180	<180 M	<180 M			
Toluene	<7 µg/kg	TM116		<140	<140 M	<140 M			
Ethylbenzene	<4 µg/kg	TM116		<80	<80 M	<80 M			
p/m-Xylene	<10 µg/kg	TM116		<200	<200 #	<200 #			
o-Xylene	<10 µg/kg	TM116		<200	<200 M	<200 M			
Naphthalene	<13 µg/kg	TM116		<260	<260 M	<260 M			
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4			
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO21-1 0.90 - 0.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543943 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO21-3 2.50 - 2.50 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543955 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AP21-2 1.90 - 1.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544165 TM048	19/01/2021	Paul Poynton	ACM debris typical of asbestos bituminous product in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ21-2 1.90 - 1.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544149 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AR21-1 0.30 - 0.30 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544096 TM048	21/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AR21-3 2.00 - 2.00 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544137 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AS20-1 0.40 - 0.40 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543930 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT20-2 1.00 - 1.00 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543966 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT21-1 0.30 - 0.30 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544071 TM048	21/01/2021	Paul Poynton	Loose fibres in soil	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT22-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544090 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT22-3 2.50 - 2.50 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544114 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU20-2 1.60 - 1.60 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543980 TM048	20/01/2021	Paul Poynton	Loose fibres and ACM debris typical of asbestos bituminous product in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU21-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544054 TM048	19/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU22-2 1.40 - 1.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544127 TM048	21/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV21-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544032 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AW20-1 0.30 - 0.30 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543990 TM048	20/01/2021	James Richards	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AW21-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544014 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23543943	23543949	23543955	23544156	23544165	23543938	23544143	23544149	23544096	23544133
Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3	AQ21-1	AQ21-2	AR21-1	AR21-2
AGS Ref.										
Depth	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021		21-Jan-2021		19-Jan-2021			20-Jan-2021	21-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	18-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
Metals in solid samples by OES	20-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	18-Jan-2021	19-Jan-2021	20-Jan-2021	18-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021
pH	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021
VOC MS (S)	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021

Lab Sample No(s)	23544137	23543930	23544000	23543960	23543966	23544071	23544080	23544090	23544110	23544114
Customer Sample Ref.	AR21-3	AS20-1	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1	AT22-2	AT22-3
AGS Ref.										
Depth	2.00 - 2.00	0.40 - 0.40	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40	1.00 - 1.00	2.50 - 2.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021	20-Jan-2021			20-Jan-2021	21-Jan-2021		20-Jan-2021		20-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	18-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021
Metals in solid samples by OES	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
TPH CWG GC (S)	22-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	18-Jan-2021

Lab Sample No(s)	23543974	23543980	23544054	23544062	23544119	23544127	23543984	23544032	23544041	23543990
Customer Sample Ref.	AU20-1	AU20-2	AU21-1	AU21-2	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
AGS Ref.										
Depth	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	19-Jan-2021			21-Jan-2021		20-Jan-2021		20-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	20-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	22-Jan-2021	20-Jan-2021	18-Jan-2021	20-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
Metals in solid samples by OES	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	22-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Lab Sample No(s)	23544006	23544014	23544023
Customer Sample Ref.	AW20-2	AW21-1	AW21-2
AGS Ref.			
Depth	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	19-Jan-2021	20-Jan-2021	19-Jan-2021
EPH CWG GC (S)	19-Jan-2021	20-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	20-Jan-2021	19-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	20-Jan-2021	21-Jan-2021	19-Jan-2021
pH	15-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	20-Jan-2021
Sample description	15-Jan-2021	18-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	19-Jan-2021
VOC MS (S)	19-Jan-2021	20-Jan-2021	18-Jan-2021

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Deeside
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	27 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210114-156
Your Reference:	P18-669
Location:	Llanwern
Report No:	584521

This report has been revised and directly supersedes 584114 in its entirety.

We received 26 samples on Thursday January 14, 2021 and 26 of these samples were scheduled for analysis which was completed on Wednesday January 27, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23544315	AR29-1		1.20 - 1.20	13/01/2021
23544309	AS29-1		1.00 - 1.00	13/01/2021
23544291	AT29-1		0.50 - 0.50	13/01/2021
23544302	AT29-2		1.10 - 1.10	13/01/2021
23544336	AU23-1		0.50 - 0.50	12/01/2021
23544341	AU23-2		1.40 - 1.40	12/01/2021
23544284	AU28-1		0.50 - 0.50	13/01/2021
23544150	AV22-1		0.50 - 0.50	12/01/2021
23544263	AV22-2		1.50 - 1.50	12/01/2021
23544346	AV23-1		0.50 - 0.50	12/01/2021
23544351	AV23-2		1.60 - 1.60	12/01/2021
23544251	AV28-1		0.30 - 0.30	13/01/2021
23544270	AV28-2		1.20 - 1.20	13/01/2021
23544277	AV28-3		2.20 - 2.20	13/01/2021
23544237	AV29-1		0.80 - 0.80	13/01/2021
23544246	AV29-2		1.70 - 1.70	13/01/2021
23544320	AW22-1		0.50 - 0.50	12/01/2021
23544325	AW22-2		1.30 - 1.30	12/01/2021
23544330	AW22-3		2.40 - 2.40	12/01/2021
23544170	AW23-1		0.60 - 0.60	12/01/2021
23544178	AW23-2		1.70 - 1.70	12/01/2021
23544190	AW26-1		0.50 - 0.50	12/01/2021
23544196	AW28-1		0.40 - 0.40	13/01/2021
23544202	AW28-2		1.40 - 1.40	13/01/2021
23544215	AW29-1		0.60 - 0.60	13/01/2021
23544221	AW29-2		1.30 - 1.30	13/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	23544315	23544309	23544291	23544302	23544336	23544341	23544284	23544150	23544263	23544346
			Customer Sample Reference	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2	AU28-1	AV22-1	AV22-2	AV23-1
			AGS Reference										
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50
			Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 13				X		X				X				X				X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2										X											
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26			X		X		X		X		X		X		X		X		X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
PAH by GCMS	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
pH	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
Sample description	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X		X	
VOC MS (S)	All	NDPs: 0 Tests: 26			X		X		X		X		X		X		X		X		X		X

23544178	AW23-2		1.70 - 1.70	250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X				
23544170	AW23-1		0.60 - 0.60	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X					
23544330	AW22-3		2.40 - 2.40	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X					
23544325	AW22-2		1.30 - 1.30	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X					
23544320	AW22-1		0.50 - 0.50	250g Amber Jar (ALE210)	S	X	X		X	X	X	X	X	X	X	X	X	X	X	X				
23544246	AV29-2		1.70 - 1.70	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X					
23544237	AV29-1		0.80 - 0.80	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X					
23544277	AV28-3		2.20 - 2.20	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X					
23544270	AV28-2		1.20 - 1.20	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X					
23544251	AV28-1		0.30 - 0.30	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X					
23544351	AV23-2		1.60 - 1.60	60g VOC (ALE215)	S						X									X				
				250g Amber Jar (ALE210)	S	X	X		X	X		X	X	X	X	X	X	X	X					
23544346	AV23-1		0.50 - 0.50	60g VOC (ALE215)	S						X									X				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23544178		23544190		23544196		23544202		23544215		23544221	
Customer Sample Reference			AW23-2		AW26-1		AW28-1		AW28-2		AW29-1		AW29-2	
AGS Reference														
Depth (m)			1.70 - 1.70		0.50 - 0.50		0.40 - 0.40		1.40 - 1.40		0.60 - 0.60		1.30 - 1.30	
Container			60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	
Sample Type			S	S	S	S	S	S	S	S	S	S	S	
Ammonium Soil by Titration	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 13				X				X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2								X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 26		X		X		X		X		X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 26		X		X		X		X		X		
PAH by GCMS	All	NDPs: 0 Tests: 26		X		X		X		X		X		
pH	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Sample description	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Total Organic Carbon	All	NDPs: 0 Tests: 26		X		X		X		X		X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
VOC MS (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X	

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23544315	AR29-1	1.20 - 1.20	Black	Sand	Stones	None
23544309	AS29-1	1.00 - 1.00	Black	Sand	Stones	None
23544291	AT29-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23544302	AT29-2	1.10 - 1.10	Black	Loamy Sand	Stones	None
23544336	AU23-1	0.50 - 0.50	Dark Brown	Sandy Clay Loam	Stones	None
23544341	AU23-2	1.40 - 1.40	Dark Brown	Sandy Loam	Stones	N/A
23544284	AU28-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23544150	AV22-1	0.50 - 0.50	Black	Loamy Sand	Stones	None
23544263	AV22-2	1.50 - 1.50	Dark Brown	Sandy Loam	Stones	Concrete/Aggregate
23544346	AV23-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23544351	AV23-2	1.60 - 1.60	Light Brown	Sand	Stones	None
23544251	AV28-1	0.30 - 0.30	Dark Brown	Silty Sand	Stones	None
23544270	AV28-2	1.20 - 1.20	Black	Loamy Sand	Stones	None
23544277	AV28-3	2.20 - 2.20	Black	Loamy Sand	Stones	None
23544237	AV29-1	0.80 - 0.80	Dark Brown	Loamy Sand	Stones	None
23544246	AV29-2	1.70 - 1.70	Black	Stone/Soil	None	None
23544320	AW22-1	0.50 - 0.50	Black	Sandy Loam	Stones	None
23544325	AW22-2	1.30 - 1.30	Black	Loamy Sand	Stones	None
23544330	AW22-3	2.40 - 2.40	Grey	Rubble/Soil	Stones	None
23544170	AW23-1	0.60 - 0.60	Dark Brown	Sand	Stones	None
23544178	AW23-2	1.70 - 1.70	Dark Brown	Sand	Stones	N/A
23544190	AW26-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23544196	AW28-1	0.40 - 0.40	Black	Loamy Sand	Stones	None
23544202	AW28-2	1.40 - 1.40	Black	Loamy Sand	Stones	None
23544215	AW29-1	0.60 - 0.60	Black	Loamy Sand	Stones	None
23544221	AW29-2	1.30 - 1.30	Black	Loamy Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	11	12	24	20	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	28.7 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		61.9 #	12.8 #	22.1 #	98.8 #	4.98 #	4.47 #
pH	1 pH Units	TM133		11.7 M	11.5 M	10.8 M	10.4 M	9.06 M	10.8 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		5.37 M	6.29 M	4.22 M	5.02 M	13.6 M	6.17 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.22 M	0.147 M	<0.02 M	0.839 M	0.309 M
Chromium	<0.9 mg/kg	TM181		307 M	222 M	25.6 M	8.05 M	226 M	77.9 M
Copper	<1.4 mg/kg	TM181		19.3 M	<14 M	6.17 M	17.8 M	24.1 M	<14 M
Iron	<1000 mg/kg	TM181		64500 #	102000 #	32600 #	23900 #	87800 #	55000 #
Lead	<0.7 mg/kg	TM181		9.84 M	13.1 M	22.5 M	16.2 M	100 M	109 M
Manganese	<0.13 mg/kg	TM181		19000 M	19600 M	5800 M	1800 M	12600 M	6930 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M	<0.14 M	<0.14 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		7.08 M	10.1 M	4.84 M	8.34 M	28.4 M	12.3 M
Selenium	<1 mg/kg	TM181		10.1 #	11.5 #	4.19 #	1.3 #	10.7 #	<10 #
Vanadium	<0.2 mg/kg	TM181		895 #	480 #	51.5 #	26.9 #	236 #	140 #
Zinc	<1.9 mg/kg	TM181		35.5 M	522 M	49.7 M	46.3 M	476 M	265 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							<0.001 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							<0.001 #
Additional Asbestos Components (Using TM048)		TM304							None #
Analysts Comments		TM304							0
Asbestos Quantification - Total - %	<0.001 %	TM304							<0.001 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	9	17	11	6.8	9.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	30.1 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0121 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		3.28 #	17.4 #	7.52 #	1.01 #	0.441 #	26 #
pH	1 pH Units	TM133		9.07 M	10.4 M	11.8 M	9.67 M	10.9 M	9.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.54 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.86 M	9.2 M	12.4 M	6.51 M	2.8 M	7.62 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.2 M	<0.2 M	0.873 M	0.24 M	0.802 M
Chromium	<0.9 mg/kg	TM181		26.5 M	<9 M	<9 M	23.7 M	57.2 M	219 M
Copper	<1.4 mg/kg	TM181		15.2 M	<14 M	15 M	10.2 M	3.15 M	19.1 M
Iron	<1000 mg/kg	TM181		53200 #	238000 #	118000 #	22000 #	6400 #	208000 #
Lead	<0.7 mg/kg	TM181		37.6 M	44.6 M	33.5 M	19.5 M	<0.7 M	29.1 M
Manganese	<0.13 mg/kg	TM181		4440 M	3470 M	3140 M	2090 M	6650 M	8970 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M	<1.4 M	<0.14 M	<0.14 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		14.6 M	53.7 M	30.9 M	13 M	1.37 M	29.5 M
Selenium	<1 mg/kg	TM181		1.61 #	<10 #	<10 #	1.15 #	3.97 #	<10 #
Vanadium	<0.2 mg/kg	TM181		60.3 #	56.6 #	54.5 #	38 #	110 #	146 #
Zinc	<1.9 mg/kg	TM181		136 M	164 M	110 M	90.6 M	27.6 M	180 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	21	15	12	11	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	127 #	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 #	0.0113 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 #	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 #	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49.1 #	44 #	11.5 #	1.45 #	23.4 #	10.9 #
pH	1 pH Units	TM133		11.5 M	11.3 M	11.3 M	8.31 #	10.2 M	10.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 #	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		9.8 M	11.7 M	17.2 M	4.66 #	8.42 M	19 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	4.82 M	0.297 #	0.132 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		<9 M	<9 M	<9 M	<9 #	138 M	<9 M
Copper	<1.4 mg/kg	TM181		19.6 M	17.8 M	43.9 M	14.3 #	15.3 M	41.3 M
Iron	<1000 mg/kg	TM181		143000 #	146000 #	321000 #	14800 #	94200 #	264000 #
Lead	<0.7 mg/kg	TM181		51.4 M	74 M	1400 M	31.7 #	147 M	41.5 M
Manganese	<0.13 mg/kg	TM181		4270 M	4290 M	10900 M	2880 #	10400 M	4700 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<0.14 #	0.239 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		20.7 M	21.3 M	41.6 M	7.14 #	18.5 M	41.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	6.48 #	3.64 #	<10 #
Vanadium	<0.2 mg/kg	TM181		64.6 #	69 #	156 #	22.1 #	311 #	83.2 #
Zinc	<1.9 mg/kg	TM181		128 M	170 M	2780 M	83 #	449 M	116 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.8	10	8.2	13	9.9	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 #	<12 M	39.6 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.0424 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0424 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		2.67 #	1.01 #	1.91 #	4.34 #	14.1 #	7.12 #
pH	1 pH Units	TM133		10.6 #	11.3 M	10.3 M	9.52 M	9.57 M	11.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 #	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 #	1.9 M	6.69 M	11 M	7.89 M	6.03 M
Cadmium	<0.02 mg/kg	TM181		<0.2 #	<0.02 M	0.742 M	<0.2 M	0.249 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		101 #	3.79 M	97.2 M	399 M	294 M	399 M
Copper	<1.4 mg/kg	TM181		<14 #	<1.4 M	17.6 M	40.3 M	<14 M	<14 M
Iron	<1000 mg/kg	TM181		42100 #	10800 #	36600 #	64300 #	175000 #	168000 #
Lead	<0.7 mg/kg	TM181		21.3 #	<0.7 M	16.1 M	49.9 M	166 M	56.1 M
Manganese	<0.13 mg/kg	TM181		4710 #	3970 M	2020 M	18900 M	19100 M	30700 M
Mercury	<0.14 mg/kg	TM181		<1.4 #	<1.4 M	0.297 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		13.5 #	1.21 M	16.7 M	26.4 M	14 M	11.2 M
Selenium	<1 mg/kg	TM181		<10 #	2.23 #	2.32 #	16.7 #	12.6 #	23.6 #
Vanadium	<0.2 mg/kg	TM181		202 #	14.8 #	102 #	622 #	227 #	506 #
Zinc	<1.9 mg/kg	TM181		43.6 #	21.1 M	95.1 M	205 M	427 M	182 M

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	18				
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M				
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132		24.7 #	19.7 #				
pH	1 pH Units	TM133		9.1 M	11.2 M				
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M				
Arsenic	<0.6 mg/kg	TM181		15.6 M	17.3 M				
Cadmium	<0.02 mg/kg	TM181		1.18 M	3.89 M				
Chromium	<0.9 mg/kg	TM181		<9 M	65.1 M				
Copper	<1.4 mg/kg	TM181		25.7 M	34.1 M				
Iron	<1000 mg/kg	TM181		222000 #	291000 #				
Lead	<0.7 mg/kg	TM181		242 M	1100 M				
Manganese	<0.13 mg/kg	TM181		6090 M	12000 M				
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M				
Nickel	<0.2 mg/kg	TM181		29.7 M	32.9 M				
Selenium	<1 mg/kg	TM181		<10 #	<10 #				
Vanadium	<0.2 mg/kg	TM181		78.6 #	168 #				
Zinc	<1.9 mg/kg	TM181		718 M	2990 M				
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		N/A					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		89.7	86.7	82.6	88.9	80.1	89.5
Acenaphthene-d10 % recovery**	%	TM218		86.2	87.6	81.7	87.6	82	88.1
Phenanthrene-d10 % recovery**	%	TM218		78	88.1	79.4	86.1	87.3	87.6
Chrysene-d12 % recovery**	%	TM218		57	79.7	74	69.9	85.9	90.4
Perylene-d12 % recovery**	%	TM218		47.7	79.9	72.4	59.5	74.2	86.3
Naphthalene	<9 µg/kg	TM218		73.9 M	39 M	<45 M	76.7 M	84.1 M	205 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<60 M	<12 M	51.3 M	<12 M
Acenaphthene	<8 µg/kg	TM218		12.3 M	<8 M	<40 M	<8 M	13 M	17.3 M
Fluorene	<10 µg/kg	TM218		22.1 M	12.2 M	<50 M	32.2 M	36.4 M	21.8 M
Phenanthrene	<15 µg/kg	TM218		238 M	107 M	<75 M	256 M	270 M	117 M
Anthracene	<16 µg/kg	TM218		53.3 M	23.1 M	<80 M	39.1 M	83 M	19.6 M
Fluoranthene	<17 µg/kg	TM218		310 M	165 M	164 M	170 M	542 M	157 M
Pyrene	<15 µg/kg	TM218		261 M	149 M	258 M	322 M	424 M	126 M
Benz(a)anthracene	<14 µg/kg	TM218		299 M	119 M	106 M	128 M	262 M	106 M
Chrysene	<10 µg/kg	TM218		321 M	126 M	153 M	194 M	274 M	126 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		357 M	220 M	209 M	187 M	366 M	183 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		134 M	66.9 M	<70 M	47.6 M	110 M	66.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		292 M	135 M	98.4 M	94.7 M	217 M	99.9 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		189 M	109 M	<90 M	71.6 M	175 M	94.7 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		73.4 M	<23 M	<115 M	<23 M	34.4 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		201 M	98.9 M	<120 M	91.8 M	146 M	85.9 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2840	1370	989	1710	3090	1420

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.4	86.1	86.4	91.2	0	88.7
Acenaphthene-d10 % recovery**	%	TM218		87	87.1	86	88.3	86.4	87.1
Phenanthrene-d10 % recovery**	%	TM218		88.8	86.6	83.7	84.8	85.1	83.7
Chrysene-d12 % recovery**	%	TM218		79	85.4	78.9	79.1	79.2	72.9
Perylene-d12 % recovery**	%	TM218		77.3	78.5	73.3	77.1	77.1	63.8
Naphthalene	<9 µg/kg	TM218		<90 M	62.9 M	56.1 M	20.5 M	95 M	48.8 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	20.3 M	<12 M	15.9 M	<12 M	25.8 M
Acenaphthene	<8 µg/kg	TM218		<80 M	<8 M	18.4 M	<8 M	<8 M	9.57 M
Fluorene	<10 µg/kg	TM218		<100 M	12.6 M	52.9 M	<10 M	21.2 M	20.8 M
Phenanthrene	<15 µg/kg	TM218		<150 M	129 M	147 M	89.4 M	129 M	293 M
Anthracene	<16 µg/kg	TM218		<160 M	30.9 M	<16 M	31 M	<16 M	73.3 M
Fluoranthene	<17 µg/kg	TM218		<170 M	170 M	92.7 M	206 M	257 M	417 M
Pyrene	<15 µg/kg	TM218		<150 M	147 M	85.8 M	162 M	215 M	324 M
Benz(a)anthracene	<14 µg/kg	TM218		<140 M	104 M	59.5 M	95.2 M	202 M	228 M
Chrysene	<10 µg/kg	TM218		<100 M	115 M	57.2 M	94.5 M	172 M	245 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<150 M	201 M	98.2 M	92.1 M	242 M	226 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<140 M	57.2 M	33.2 M	39.3 M	<14 M	92.2 M
Benzo(a)pyrene	<15 µg/kg	TM218		<150 M	108 M	53.9 M	76.7 M	143 M	182 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<180 M	102 M	52.8 M	56.3 M	105 M	134 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 M	<23 M	<23 M	<23 M	<23 M	38.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<240 M	92.7 M	50.9 M	53.1 M	93.2 M	139 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<1180	1350	859	1030	1670	2500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		87.2	89	86.1	92.2	87.9	91.3
Acenaphthene-d10 % recovery**	%	TM218		87.3	85.1	83.2	88.4	85.9	87.5
Phenanthrene-d10 % recovery**	%	TM218		85.1	83.7	74.9	85	86.7	84.1
Chrysene-d12 % recovery**	%	TM218		67.5	72.9	42.5	76.2	83.7	79.1
Perylene-d12 % recovery**	%	TM218		63.7	69	27.1	77	82	78.3
Naphthalene	<9 µg/kg	TM218		102 M	54.9 M	38.3 M	11.2 #	1440 M	67.6 M
Acenaphthylene	<12 µg/kg	TM218		17.2 M	<12 M	<12 M	<12 #	341 M	19.4 M
Acenaphthene	<8 µg/kg	TM218		56.4 M	11.2 M	<8 M	<8 #	65.1 M	<8 M
Fluorene	<10 µg/kg	TM218		211 M	27.4 M	12 M	<10 #	279 M	37.4 M
Phenanthrene	<15 µg/kg	TM218		442 M	183 M	113 M	28.7 #	1940 M	137 M
Anthracene	<16 µg/kg	TM218		79.2 M	37.9 M	<16 M	<16 #	530 M	28.3 M
Fluoranthene	<17 µg/kg	TM218		347 M	268 M	82.9 M	28.5 #	2930 M	99.1 M
Pyrene	<15 µg/kg	TM218		312 M	232 M	72.8 M	24.6 #	2190 M	77.6 M
Benz(a)anthracene	<14 µg/kg	TM218		260 M	200 M	22.1 M	16.5 #	1340 M	52 M
Chrysene	<10 µg/kg	TM218		258 M	219 M	25.1 M	16 #	1330 M	56.7 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		383 M	316 M	19.1 M	28 #	1930 M	90.5 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		140 M	102 M	<14 M	<14 #	613 M	27.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		311 M	215 M	<15 M	<15 #	1210 M	41.3 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		203 M	137 M	<18 M	<18 #	946 M	35.3 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		57.5 M	42.6 M	<23 M	<23 #	197 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		209 M	145 M	<24 M	<24 #	806 M	35.4 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3390	2190	385	153	18100	805

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		89.9	87.5	91.8	87.5	89	85.5
Acenaphthene-d10 % recovery**	%	TM218		87.8	92.5	88.3	90.4	86.7	87.6
Phenanthrene-d10 % recovery**	%	TM218		84.4	96	86.8	94.8	86.4	87.8
Chrysene-d12 % recovery**	%	TM218		80.4	91.5	88.7	90	79.8	76.5
Perylene-d12 % recovery**	%	TM218		79.9	86.5	89.6	80.1	76.6	70.5
Naphthalene	<9 µg/kg	TM218		71.6 #	<450 M	72.6 M	25.1 M	47.3 M	64 M
Acenaphthylene	<12 µg/kg	TM218		<12 #	<600 M	<60 M	<12 M	14.7 M	18 M
Acenaphthene	<8 µg/kg	TM218		<8 #	<400 M	<40 M	<8 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 #	<500 M	<50 M	<10 M	<10 M	14.2 M
Phenanthrene	<15 µg/kg	TM218		63 #	962 M	<75 M	72.2 M	106 M	115 M
Anthracene	<16 µg/kg	TM218		18.8 #	<800 M	<80 M	<16 M	22.7 M	32.8 M
Fluoranthene	<17 µg/kg	TM218		91.6 #	995 M	<85 M	122 M	149 M	158 M
Pyrene	<15 µg/kg	TM218		67.8 #	913 M	<75 M	117 M	122 M	120 M
Benz(a)anthracene	<14 µg/kg	TM218		36.2 #	<700 M	<70 M	72.3 M	69.7 M	82.2 M
Chrysene	<10 µg/kg	TM218		28.2 #	<500 M	60.8 M	77.8 M	72.3 M	89.4 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		41.1 #	<750 M	89.8 M	119 M	115 M	150 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 #	<700 M	<70 M	35.7 M	32.6 M	47.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		22.8 #	<750 M	<75 M	63.9 M	65.5 M	74.6 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 #	<900 M	<90 M	54.9 M	59.3 M	75.5 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 #	<1150 M	<115 M	<23 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 #	<1200 M	<120 M	57.5 M	57.3 M	65.2 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		441	<5900	<590	818	933	1110

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90.4	87.8				
Acenaphthene-d10 % recovery**	%	TM218		87	86.1				
Phenanthrene-d10 % recovery**	%	TM218		79.7	83.5				
Chrysene-d12 % recovery**	%	TM218		61	79				
Perylene-d12 % recovery**	%	TM218		50.4	69.6				
Naphthalene	<9 µg/kg	TM218		13.5 M	47.7 M				
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M				
Acenaphthene	<8 µg/kg	TM218		<8 M	17.9 M				
Fluorene	<10 µg/kg	TM218		<10 M	29.2 M				
Phenanthrene	<15 µg/kg	TM218		46 M	182 M				
Anthracene	<16 µg/kg	TM218		<16 M	49 M				
Fluoranthene	<17 µg/kg	TM218		41.4 M	294 M				
Pyrene	<15 µg/kg	TM218		37.1 M	293 M				
Benz(a)anthracene	<14 µg/kg	TM218		26 M	125 M				
Chrysene	<10 µg/kg	TM218		34.6 M	136 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		58.2 M	196 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		17.1 M	50.9 M				
Benzo(a)pyrene	<15 µg/kg	TM218		25.9 M	106 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		22 M	93.5 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	79.3 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		322	1700				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		80.1	79.3	79.7	35.1 4	86.2	117
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	10.5
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	21.1
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	24.6
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2780	<1000	2450	7050	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		10100	3780	15000	23700	1920	3580
Aliphatics >C21-C35	<1000 µg/kg	TM414		29900	20700	98800	35500	17200	10700
Aliphatics >C35-C44	<1000 µg/kg	TM414		4240	12100	67500	7370	4160	1170
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		47200	37700	184000	73900	23400	16300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		58800	49400	225000	116000	42400	20300
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	19.9
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	16.4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	4090	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2020	<1000	1170	6640	2840	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		8050	9560	34400	27900	14600	2440
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1270	4610	3050	1300	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1190	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		11600	11600	40700	41800	19000	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		58800	49400	225000	116000	42400	16400
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50	56.2
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	<20	56.2

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		113	86.7	86.5	90.2	97.7	67 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	47.2	<10	16.1	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	388	<10	47.2	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	3000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	33100	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1190	4470	50600	<1000	<1000	1790
Aliphatics >C21-C35	<1000 µg/kg	TM414		9020	19900	67000	<1000	5790	8620
Aliphatics >C35-C44	<1000 µg/kg	TM414		1370	6240	14300	<1000	1390	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11700	31200	168000	<5000	7180	11300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		32700	50400	198000	<10000	12500	31100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	259	<10	31.1	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	9290	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2340	<1000	9860	<1000	<1000	1890
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17400	17500	9820	1180	3980	15200
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1340	<1000	<1000	<1000	<1000	2530
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		21000	19300	30100	<5000	5320	19800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		32700	50400	199000	<10000	12600	31100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	436	<50	63.3	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	259	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	695	<20	63.3	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		97.4	69.3 4	92.6	109	80.5 2	88.1
Aliphatics >C5-C6	<10 µg/kg	TM089		13.6	<10 4	<10	18.2	38.4 2	42.9
Aliphatics >C6-C8	<10 µg/kg	TM089		36	<10 4	<10	41	64.4 2	98.3
Aliphatics >C8-C10	<10 µg/kg	TM089		37.2	<10 4	<10	85.5	50.9 2	525
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	13700
Aliphatics >C12-C16	<1000 µg/kg	TM414		2050	1170	<1000	4070	4050	9440
Aliphatics >C16-C21	<1000 µg/kg	TM414		6720	6340	20500	6360	11600	4010
Aliphatics >C21-C35	<1000 µg/kg	TM414		12400	10800	38000	17000	32300	39700
Aliphatics >C35-C44	<1000 µg/kg	TM414		2220	1300	1090	6100	31300	18900
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		23400	19600	60400	33500	79800	85700
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		42100	34700	69200	39500	150000	99000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10 2	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10 2	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		24.8	<10 4	<10	57	33.9 2	350
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1950	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1640	<1000	<1000	<1000	2950	1170
Aromatics > EC16-EC21	<1000 µg/kg	TM414		3730	2720	2140	<1000	13500	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		12300	10500	5160	4640	48100	9210
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3990	1350
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		18700	15100	8800	6040	70500	13300
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		42200	34700	69200	39700	150000	100000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		86.8	<50 4	<50	145	154 2	667
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	57	<50 2	350
GRO >C5-C10	<20 µg/kg	TM089		86.8	<20 4	<20	202	154 2	1020

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		90.1	72.6	104	122	70.4	124
Aliphatics >C5-C6	<10 µg/kg	TM089		18	27.8	20.7	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		30.8	43.3	33.8	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		40.3	65.5	38.1	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<10000	2050	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<10000	7070	<1000	5000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1100	25000	4650	5280	14800	1260
Aliphatics >C21-C35	<1000 µg/kg	TM414		2790	343000	34400	18900	34300	4850
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	375000	48300	4980	3520	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	747000	96400	30100	57600	6190
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	1160000	142000	55800	67400	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		27.6	43.3	26.1	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1400	381000	39300	22600	7590	2440
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	32500	4470	2600	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	15000	1230	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	415000	45300	25700	9730	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	1160000	142000	55800	67400	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		89.1	137	92.6	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		89.1	137	92.6	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94.3	126				
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10				
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10				
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10				
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C16-C21	<1000 µg/kg	TM414		6380	10000				
Aliphatics >C21-C35	<1000 µg/kg	TM414		10800	33000				
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	1510				
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		18500	44800				
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		47500	56300				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10				
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10				
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	1720				
Aromatics > EC21-EC35	<1000 µg/kg	TM414		25900	8780				
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2710	<1000				
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000				
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		29000	11600				
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		47500	56300				
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50				
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50				
GRO >C5-C10	<20 µg/kg	TM089		<20	<20				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	111	105	107	108
Toluene-d8**	%	TM116		94.5	98.2	95.8	96	96.7	96.7
4-Bromofluorobenzene**	%	TM116		87.2	97.1	89.8	90.4	93.6	95.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	104	109	106	103
Toluene-d8**	%	TM116		95.8	97.9	97.6	96.8	97.3	95.5
4-Bromofluorobenzene**	%	TM116		92.3	93.9	93.1	94.1	95.3	88.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	104	105	110	105 2	106
Toluene-d8**	%	TM116		94.6	97.8	98	98.2	94.3 2	96.9
4-Bromofluorobenzene**	%	TM116		88.1	95.9	96.9	92.2	87.8 2	92.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 #	<200 2 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 #	<180 2 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 #	<140 2 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 #	<80 2 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 2 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 #	<200 2 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 #	536 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4 2	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800 2	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	112	107	112	104	107
Toluene-d8**	%	TM116		98.5	94.5	97.3	95.9	97.9	96.8
4-Bromofluorobenzene**	%	TM116		97.8	93.9	95.7	93.5	98.1	97.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 #	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 #	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 #	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 #	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 #	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 #	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
Dibromofluoromethane**	%	TM116		110	105				
Toluene-d8**	%	TM116		97.9	98.8				
4-Bromofluorobenzene**	%	TM116		98.5	97.3				
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M				
Benzene	<9 µg/kg	TM116		<180 M	<180 M				
Toluene	<7 µg/kg	TM116		<140 M	<140 M				
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M				
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #				
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M				
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M				
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4				
Sum of BTEX	<40 µg/kg	TM116		<800	<800				

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AS29-1 1.00 - 1.00 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544309 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT29-1 0.50 - 0.50 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544291 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU23-2 1.40 - 1.40 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544341 TM048	19/01/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV22-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544150 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV23-2 1.60 - 1.60 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544351 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV28-1 0.30 - 0.30 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544251 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV28-3 2.20 - 2.20 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544277 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV29-1 0.80 - 0.80 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544237 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW22-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544320 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW22-3 2.40 - 2.40 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544330 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW23-2 1.70 - 1.70 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544178 TM048	19/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW28-1 0.40 - 0.40 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544196 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW29-1 0.60 - 0.60 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544215 TM048	20/01/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AU23-2	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.40 - 1.40					
Sample Type	SOLID					
Date Sampled	12/01/2021 00:00:00					
Date Received	14/01/2021 05:00:00					
SDG	210114-156					
Original Sample	23544341					
Method Number	TM304					
Cust. Sample Ref.	AW29-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.60 - 0.60					
Sample Type	SOLID					
Date Sampled	13/01/2021 00:00:00					
Date Received	14/01/2021 05:00:00					
SDG	210114-156					
Original Sample	23544215					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Test Completion Dates

Lab Sample No(s)	23544315	23544309	23544291	23544302	23544336	23544341	23544284	23544150	23544263	23544346
Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2	AU28-1	AV22-1	AV22-2	AV23-1
AGS Ref.										
Depth	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	20-Jan-2021			19-Jan-2021		21-Jan-2021		
Asbestos Quantification - Full						25-Jan-2021				
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	20-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021
pH	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
TPH CWG GC (S)	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
VOC MS (S)	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021

Lab Sample No(s)	23544351	23544251	23544270	23544277	23544237	23544246	23544320	23544325	23544330	23544170
Customer Sample Ref.	AV23-2	AV28-1	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2	AW22-3	AW23-1
AGS Ref.										
Depth	1.60 - 1.60	0.30 - 0.30	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30	2.40 - 2.40	0.60 - 0.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021	21-Jan-2021		20-Jan-2021	20-Jan-2021		21-Jan-2021		20-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021
pH	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23544178	23544190	23544196	23544202	23544215	23544221
Customer Sample Ref.	AW23-2	AW26-1	AW28-1	AW28-2	AW29-1	AW29-2
AGS Ref.						
Depth	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40	0.60 - 0.60	1.30 - 1.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	19-Jan-2021		20-Jan-2021		20-Jan-2021	
Asbestos Quantification - Full					27-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
pH	15-Jan-2021	15-Jan-2021	18-Jan-2021	20-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
VOC MS (S)	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	28 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210115-27
Your Reference:	P18-669
Location:	Llanwern
Report No:	584712

This report has been revised and directly supersedes 584671 in its entirety.

We received 27 samples on Friday January 15, 2021 and 27 of these samples were scheduled for analysis which was completed on Thursday January 28, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23547855	AL24-1		0.70 - 0.70	13/01/2021
23547865	AL24-2		1.30 - 1.30	13/01/2021
23547873	AM33-1		0.30 - 0.30	13/01/2021
23547879	AM33-2		1.30 - 1.30	13/01/2021
23547829	AN23-1		0.20 - 0.20	13/01/2021
23547841	AN23-2		1.50 - 1.50	13/01/2021
23548024	AO27-1		0.60 - 0.60	13/01/2021
23548034	AO27-2		1.20 - 1.20	13/01/2021
23547788	AO29-1		0.50 - 0.50	13/01/2021
23547917	AO29-2		1.50 - 1.50	13/01/2021
23548085	AQ24-1		0.20 - 0.20	13/01/2021
23547819	AQ24-2		1.50 - 1.50	13/01/2021
23548065	AQ25-1		0.20 - 0.20	13/01/2021
23548075	AQ25-2		1.50 - 1.50	13/01/2021
23548044	AQ26-1		0.20 - 0.20	13/01/2021
23548052	AQ26-2		1.50 - 1.50	13/01/2021
23547887	W168-1		0.20 - 0.20	14/01/2021
23547896	W168-2		0.20 - 0.20	14/01/2021
23547907	W168-3		0.20 - 0.20	14/01/2021
23547927	W168-4		0.20 - 0.20	14/01/2021
23547935	W168-5		0.20 - 0.20	14/01/2021
23547942	W168-6		0.20 - 0.20	14/01/2021
23547958	W168-7		0.20 - 0.20	14/01/2021
23547970	W168-8		0.20 - 0.20	14/01/2021
23547983	W168-9		0.20 - 0.20	14/01/2021
23548001	W168-10		0.20 - 0.20	14/01/2021
23548010	W168-11		0.20 - 0.20	14/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23547855		23547865		23547873		23547879		23547929		23547841		23548024		23548034				
Customer Sample Reference			AL24-1		AL24-2		AM33-1		AM33-2		AN23-1		AN23-2		AO27-1		AO27-2				
AGS Reference																					
Depth (m)			0.70 - 0.70		1.30 - 1.30		0.30 - 0.30		1.30 - 1.30		0.20 - 0.20		1.50 - 1.50		0.60 - 0.60		1.20 - 1.20				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 14	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 26		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	

23548052	AQ26-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
23548044	AQ26-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
				1kg TUB with Handle (ALE260)	S		x																
23548075	AQ25-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
23548065	AQ25-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
				1kg TUB with Handle (ALE260)	S		x	x															
23547819	AQ24-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
23548085	AQ24-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
				1kg TUB with Handle (ALE260)	S		x																
23547917	AO29-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
23547788	AO29-1		0.50 - 0.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x			
				1kg TUB with Handle (ALE260)	S		x																
23548034	AO27-2		1.20 - 1.20	60g VOC (ALE215)	S							x											x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)				23547887	23547896		23547907			23547927			23547935			23547942			23547958		23547970
Customer Sample Reference				W168-1	W168-2		W168-3			W168-4			W168-5			W168-6			W168-7		W168-8
AGS Reference																					
Depth (m)				0.20 - 0.20	0.20 - 0.20		0.20 - 0.20			0.20 - 0.20			0.20 - 0.20			0.20 - 0.20			0.20 - 0.20		0.20 - 0.20
Container				1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type				S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 14		X					X					X					X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 27				X		X			X		X			X		X				X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 26			X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 27				X		X			X		X			X		X				X	

23548010	W168-11		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X		X	X	
				1kg TUB with Handle (ALE260)	S		X											
23548001	W168-10		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
23547983	W168-9		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X											
23547970	W168-8		0.20 - 0.20	60g VOC (ALE215)	S					X								X

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23547855	AL24-1	0.70 - 0.70	Black	Sand	Stones	None
23547865	AL24-2	1.30 - 1.30	Grey	Gravel	Stones	None
23547873	AM33-1	0.30 - 0.30	Dark Brown	Sand	Stones	None
23547879	AM33-2	1.30 - 1.30	Dark Brown	Sand	Stones	None
23547829	AN23-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547841	AN23-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548024	AO27-1	0.60 - 0.60	Dark Brown	Sandy Loam	Stones	Vegetation
23548034	AO27-2	1.20 - 1.20	Grey	Sand	Stones	N/A
23547788	AO29-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23547917	AO29-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548085	AQ24-1	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23547819	AQ24-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548065	AQ25-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23548075	AQ25-2	1.50 - 1.50	Dark Brown	Sand	None	Stones
23548044	AQ26-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23548052	AQ26-2	1.50 - 1.50	Dark Brown	Sand	None	Stones
23547887	W168-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547896	W168-2	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Stones
23547907	W168-3	0.20 - 0.20	Dark Brown	Silt Loam	Stones	Vegetation
23547927	W168-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547935	W168-5	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547942	W168-6	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23547958	W168-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23547970	W168-8	0.20 - 0.20	Dark Brown	Silt Loam	Stones	Vegetation
23547983	W168-9	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23548001	W168-10	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23548010	W168-11	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Tar

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	13	8.3	8.6	5.8	8.2
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 #	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		>100 #	2.76 #	1.19 #	10.3 #	3.64 #	1.11 #
pH	1 pH Units	TM133		10.4 M	11 #	12.6 M	11.8 M	12 M	12.7 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.68 M	1.33 #	7.22 M	9.12 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 #	<0.2 M	0.258 M	0.477 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		13.1 M	7.04 #	628 M	121 M	841 M	376 M
Copper	<1.4 mg/kg	TM181		12.2 M	<1.4 #	14.5 M	23.8 M	<14 M	26.1 M
Iron	<1000 mg/kg	TM181		31600 #	12000 #	180000 #	65800 #	159000 #	139000 #
Lead	<0.7 mg/kg	TM181		18.4 M	<0.7 #	22.5 M	23.5 M	7.35 M	14.9 M
Manganese	<0.13 mg/kg	TM181		2410 M	4760 #	209000 M	5090 M	33700 M	34500 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 #	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		10.4 M	0.818 #	24.6 M	45.1 M	9.88 M	20.6 M
Selenium	<1 mg/kg	TM181		2.33 #	2.98 #	22.7 #	<10 #	18.6 #	24 #
Vanadium	<0.2 mg/kg	TM181		28.7 #	23.1 #	571 #	96 #	839 #	1800 #
Zinc	<1.9 mg/kg	TM181		83.8 M	10.8 #	63.9 M	86.6 M	75.2 M	51.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
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aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.3	7	7.4	6.5	16	5.5
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		13.6 #	2.5 #	5.14 #	20.5 #	5.65 #	1.14 #
pH	1 pH Units	TM133		11.4 M	11.9 M	8.92 M	12.6 M	10.7 M	11.8 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.95 M	7.22 M	9.67 M	<6 M	<60 M	11 M
Cadmium	<0.02 mg/kg	TM181		0.893 M	<0.2 M	1.81 M	0.401 M	<2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		131 M	39.8 M	456 M	802 M	291 M	28.6 M
Copper	<1.4 mg/kg	TM181		79.3 M	<14 M	81.4 M	<14 M	<140 M	16.8 M
Iron	<1000 mg/kg	TM181		107000 #	430000 #	140000 #	140000 #	116000 #	356000 #
Lead	<0.7 mg/kg	TM181		135 M	26.3 M	165 M	7.04 M	84.8 M	17.6 M
Manganese	<0.13 mg/kg	TM181		11600 M	6230 M	23400 M	38000 M	16500 M	6350 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	1.84 M	<1.4 M	<1.4 M	<14 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		31.2 M	18.1 M	29.7 M	7.31 M	155 M	35.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	10.1 #	21.7 #	<100 #	<10 #
Vanadium	<0.2 mg/kg	TM181		396 #	325 #	419 #	681 #	696 #	235 #
Zinc	<1.9 mg/kg	TM181		764 M	191 M	531 M	44.5 M	207 M	186 M

Validated

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Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		24	8.2	18	6.7	13	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0109 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	0.0114 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		19.1 #	1.57 #	7.38 #	0.924 #	27.9 #	26.5 #
pH	1 pH Units	TM133		9.53 M	12.7 M	9.19 M	12.7 M	9.42 M	9.7 M
Cyanide, Total	<1 mg/kg	TM153		1.06 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.52 M	<6 M	8.64 M	6.23 M	8 M	8.65 M
Cadmium	<0.02 mg/kg	TM181		1.23 M	<0.2 M	0.337 M	0.794 M	0.896 M	1.26 M
Chromium	<0.9 mg/kg	TM181		257 M	565 M	255 M	302 M	182 M	323 M
Copper	<1.4 mg/kg	TM181		25.6 M	28.5 M	19.3 M	20.4 M	30.2 M	19.5 M
Iron	<1000 mg/kg	TM181		98900 #	210000 #	86000 #	253000 #	72100 #	94900 #
Lead	<0.7 mg/kg	TM181		132 M	24.2 M	121 M	18.9 M	142 M	204 M
Manganese	<0.13 mg/kg	TM181		13100 M	49500 M	13700 M	24100 M	21000 M	15500 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		21.8 M	23.7 M	20.8 M	39 M	17.9 M	19.8 M
Selenium	<1 mg/kg	TM181		<10 #	27.6 #	10.7 #	<10 #	12.9 #	13.8 #
Vanadium	<0.2 mg/kg	TM181		361 #	1960 #	318 #	1300 #	270 #	357 #
Zinc	<1.9 mg/kg	TM181		446 M	55.6 M	359 M	114 M	501 M	596 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		0.0083 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		Chrysotile detected. #					
Analysts Comments		TM304		Fibre bundles in soil.					
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0083 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	12	20	11	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0116 M	<0.01 M	0.0126 M	<0.01 M	0.0234 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0126 M	<0.01 M	0.0117 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		27.6 #	28.1 #	19.3 #	28.8 #	24.5 #	13.3 #
pH	1 pH Units	TM133		9.15 M	9.82 M	10.2 M	9.24 M	9.65 M	9.08 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.73 M	10.8 M	8.38 M	9.62 M	7.96 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.23 M	0.989 M	2.1 M	3.45 M	1.3 M	1.01 M
Chromium	<0.9 mg/kg	TM181		253 M	354 M	304 M	271 M	298 M	175 M
Copper	<1.4 mg/kg	TM181		19.8 M	28.4 M	23.9 M	28.1 M	24.1 M	17 M
Iron	<1000 mg/kg	TM181		87600 #	140000 #	124000 #	99000 #	85000 #	78100 #
Lead	<0.7 mg/kg	TM181		107 M	217 M	241 M	184 M	130 M	93.1 M
Manganese	<0.13 mg/kg	TM181		16000 M	16800 M	17100 M	12000 M	16000 M	12600 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		19.1 M	25.1 M	20 M	22.1 M	19.1 M	20 M
Selenium	<1 mg/kg	TM181		<10 #	13.6 #	<10 #	11.1 #	11.4 #	<10 #
Vanadium	<0.2 mg/kg	TM181		328 #	365 #	408 #	286 #	290 #	200 #
Zinc	<1.9 mg/kg	TM181		364 M	806 M	903 M	564 M	454 M	324 M

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	9.1	14			
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.011 M	0.0117 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.011 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		23.3 #	30.9 #	30.2 #			
pH	1 pH Units	TM133		10.1 M	9.95 M	10.7 M			
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M			
Arsenic	<0.6 mg/kg	TM181		7.75 M	9.37 M	8.5 M			
Cadmium	<0.02 mg/kg	TM181		2.49 M	1.39 M	2.29 M			
Chromium	<0.9 mg/kg	TM181		248 M	283 M	290 M			
Copper	<1.4 mg/kg	TM181		20 M	28.2 M	21.2 M			
Iron	<1000 mg/kg	TM181		98300 #	109000 #	111000 #			
Lead	<0.7 mg/kg	TM181		314 M	200 M	255 M			
Manganese	<0.13 mg/kg	TM181		14000 M	14600 M	17400 M			
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M			
Nickel	<0.2 mg/kg	TM181		18.7 M	25.1 M	19.8 M			
Selenium	<1 mg/kg	TM181		<10 #	13.6 #	13.3 #			
Vanadium	<0.2 mg/kg	TM181		251 #	355 #	365 #			
Zinc	<1.9 mg/kg	TM181		987 M	645 M	940 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.9	88.9	88.4	89.6	88.6	91.4
Acenaphthene-d10 % recovery**	%	TM218		85.2	87.3	88.9	91.8	91.7	89.5
Phenanthrene-d10 % recovery**	%	TM218		87.7	87.5	90.1	93.3	92.4	91.3
Chrysene-d12 % recovery**	%	TM218		79.2	83.1	87.1	88.7	82	92.1
Perylene-d12 % recovery**	%	TM218		64.5	85	91.3	92.2	85	95.9
Naphthalene	<9 µg/kg	TM218		426 M	66.3 #	18.5 M	123 M	254 M	253 M
Acenaphthylene	<12 µg/kg	TM218		169 M	18.2 #	<12 M	224 M	72.9 M	58 M
Acenaphthene	<8 µg/kg	TM218		40.7 M	16.9 #	15 M	13.3 M	27.4 M	69.8 M
Fluorene	<10 µg/kg	TM218		129 M	32.3 #	<10 M	125 M	81.2 M	64.9 M
Phenanthrene	<15 µg/kg	TM218		1510 M	262 #	133 M	972 M	782 M	2300 M
Anthracene	<16 µg/kg	TM218		392 M	67.3 #	23.3 M	540 M	206 M	263 M
Fluoranthene	<17 µg/kg	TM218		3040 M	419 #	273 M	2530 M	1100 M	2060 M
Pyrene	<15 µg/kg	TM218		2420 M	420 #	204 M	1750 M	788 M	1410 M
Benz(a)anthracene	<14 µg/kg	TM218		1800 M	191 #	131 M	1270 M	382 M	718 M
Chrysene	<10 µg/kg	TM218		2000 M	202 #	179 M	1370 M	354 M	856 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2780 M	352 #	319 M	1620 M	557 M	1030 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		875 M	121 #	97.9 M	537 M	185 M	421 M
Benzo(a)pyrene	<15 µg/kg	TM218		1820 M	207 #	128 M	986 M	323 M	630 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1440 M	190 #	167 M	813 M	301 M	515 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		345 M	38.5 #	33.7 M	172 M	42.8 M	92.3 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1410 M	170 #	147 M	723 M	249 M	489 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		20600	2770	1870	13800	5710	11200

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		88.5	91.1	90.9	81.7	84.7	84.7
Acenaphthene-d10 % recovery**	%	TM218		91.7	90.9	92.2	88.4	86.6	86.8
Phenanthrene-d10 % recovery**	%	TM218		94.3	90.4	93	91.3	88.3	89.6
Chrysene-d12 % recovery**	%	TM218		87.8	85.7	89.6	81	80	82
Perylene-d12 % recovery**	%	TM218		88.6	87.5	92.9	78.7	81.8	85.3
Naphthalene	<9 µg/kg	TM218		1330 M	311 M	92.3 M	134 M	866 M	416 M
Acenaphthylene	<12 µg/kg	TM218		508 M	54.7 M	40.1 M	14.7 M	279 M	88.9 M
Acenaphthene	<8 µg/kg	TM218		112 M	17.8 M	43.5 M	11.6 M	54.3 M	13.6 M
Fluorene	<10 µg/kg	TM218		419 M	22 M	47.2 M	10.8 M	227 M	63.7 M
Phenanthrene	<15 µg/kg	TM218		3880 M	308 M	366 M	266 M	1930 M	476 M
Anthracene	<16 µg/kg	TM218		944 M	70.6 M	88.6 M	32.3 M	418 M	102 M
Fluoranthene	<17 µg/kg	TM218		6780 M	544 M	749 M	338 M	3040 M	732 M
Pyrene	<15 µg/kg	TM218		4880 M	434 M	661 M	277 M	2250 M	558 M
Benz(a)anthracene	<14 µg/kg	TM218		2890 M	256 M	505 M	181 M	1330 M	319 M
Chrysene	<10 µg/kg	TM218		2690 M	255 M	591 M	206 M	1150 M	292 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4210 M	455 M	910 M	350 M	2100 M	495 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1350 M	138 M	375 M	141 M	682 M	171 M
Benzo(a)pyrene	<15 µg/kg	TM218		2900 M	267 M	609 M	173 M	1360 M	300 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2450 M	232 M	562 M	143 M	1180 M	270 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		368 M	41 M	111 M	<23 M	220 M	53.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2070 M	209 M	580 M	155 M	1090 M	250 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		37800	3620	6330	2430	18200	4600

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86	88.5	85.7	88.6	87.5	83.8
Acenaphthene-d10 % recovery**	%	TM218		85.8	90.5	84.9	90.5	89.8	88.1
Phenanthrene-d10 % recovery**	%	TM218		85.2	93	83.1	91.9	91.5	88.7
Chrysene-d12 % recovery**	%	TM218		80.4	89.1	78	89.8	81.6	78.9
Perylene-d12 % recovery**	%	TM218		76.7	92.8	74.9	94.2	78.8	75.5
Naphthalene	<9 µg/kg	TM218		7620 M	1230 M	3890 M	198 M	3280 M	3990 M
Acenaphthylene	<12 µg/kg	TM218		1880 M	830 M	833 M	139 M	977 M	1150 M
Acenaphthene	<8 µg/kg	TM218		264 M	195 M	209 M	135 M	200 M	191 M
Fluorene	<10 µg/kg	TM218		1690 M	1050 M	761 M	146 M	797 M	780 M
Phenanthrene	<15 µg/kg	TM218		13900 M	10400 M	6660 M	3290 M	5600 M	5030 M
Anthracene	<16 µg/kg	TM218		3190 M	1950 M	1420 M	462 M	1690 M	1850 M
Fluoranthene	<17 µg/kg	TM218		20800 M	11900 M	11100 M	3380 M	9570 M	9340 M
Pyrene	<15 µg/kg	TM218		14200 M	8110 M	8060 M	2390 M	6840 M	6890 M
Benz(a)anthracene	<14 µg/kg	TM218		7600 M	4790 M	4410 M	1650 M	4800 M	4770 M
Chrysene	<10 µg/kg	TM218		6160 M	4700 M	3820 M	1680 M	3810 M	3880 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		10600 M	5930 M	6830 M	2290 M	6570 M	6860 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		3740 M	2160 M	2300 M	774 M	2310 M	2390 M
Benzo(a)pyrene	<15 µg/kg	TM218		6210 M	4090 M	3970 M	1330 M	3990 M	4170 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5250 M	3430 M	3700 M	1150 M	3370 M	3590 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		676 M	686 M	454 M	261 M	575 M	623 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4230 M	2930 M	3040 M	1010 M	2610 M	2720 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		108000	64400	61400	20300	57000	58200

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90	84.7	81.8	86.4	80.8	86.6
Acenaphthene-d10 % recovery**	%	TM218		88.9	86.3	81.7	82.3	87.6	82.5
Phenanthrene-d10 % recovery**	%	TM218		91.3	88	87	81.2	91.4	81.9
Chrysene-d12 % recovery**	%	TM218		89.1	79.3	75	75.1	79.5	79.8
Perylene-d12 % recovery**	%	TM218		89.1	77.1	74.4	74.3	73.9	78.1
Naphthalene	<9 µg/kg	TM218		3190 M	4790 M	4390 M	4170 M	4380 M	2180 M
Acenaphthylene	<12 µg/kg	TM218		1490 M	1260 M	1960 M	4800 M	1040 M	1180 M
Acenaphthene	<8 µg/kg	TM218		158 M	255 M	385 M	868 M	221 M	118 M
Fluorene	<10 µg/kg	TM218		903 M	1060 M	1940 M	10300 M	864 M	674 M
Phenanthrene	<15 µg/kg	TM218		6320 M	7170 M	16300 M	47400 M	5590 M	4750 M
Anthracene	<16 µg/kg	TM218		<16 M	3420 M	5230 M	8330 M	1810 M	1510 M
Fluoranthene	<17 µg/kg	TM218		15300 M	13100 M	26500 M	43400 M	9670 M	9990 M
Pyrene	<15 µg/kg	TM218		10900 M	9310 M	18000 M	26900 M	6960 M	7310 M
Benz(a)anthracene	<14 µg/kg	TM218		7830 M	6280 M	10800 M	15400 M	4450 M	4990 M
Chrysene	<10 µg/kg	TM218		7160 M	5610 M	9500 M	16400 M	3790 M	4850 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		10900 M	9250 M	14600 M	17800 M	6520 M	7170 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		3550 M	3030 M	4850 M	5620 M	2240 M	2270 M
Benzo(a)pyrene	<15 µg/kg	TM218		7170 M	5260 M	8700 M	11100 M	3760 M	4420 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5310 M	4270 M	6950 M	8280 M	2850 M	3570 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		1180 M	694 M	1450 M	2030 M	489 M	735 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4730 M	3500 M	5800 M	6960 M	2400 M	3150 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		86000	78300	137000	230000	57000	58900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.6	88.6	82.1			
Acenaphthene-d10 % recovery**	%	TM218		85.6	90.8	80.3			
Phenanthrene-d10 % recovery**	%	TM218		85.9	92.5	83.5			
Chrysene-d12 % recovery**	%	TM218		77.1	88.1	72.6			
Perylene-d12 % recovery**	%	TM218		70.7	84.6	70.8			
Naphthalene	<9 µg/kg	TM218		4520 M	5430 M	4000 M			
Acenaphthylene	<12 µg/kg	TM218		1690 M	1570 M	1250 M			
Acenaphthene	<8 µg/kg	TM218		272 M	213 M	308 M			
Fluorene	<10 µg/kg	TM218		1230 M	1210 M	1300 M			
Phenanthrene	<15 µg/kg	TM218		8820 M	10800 M	9800 M			
Anthracene	<16 µg/kg	TM218		3780 M	3820 M	3220 M			
Fluoranthene	<17 µg/kg	TM218		18000 M	17500 M	15100 M			
Pyrene	<15 µg/kg	TM218		12800 M	12400 M	11000 M			
Benz(a)anthracene	<14 µg/kg	TM218		8290 M	7860 M	7860 M			
Chrysene	<10 µg/kg	TM218		7010 M	6820 M	6930 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		11300 M	10300 M	10700 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		4270 M	3230 M	3640 M			
Benzo(a)pyrene	<15 µg/kg	TM218		6560 M	6260 M	6690 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		4730 M	4900 M	5090 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		745 M	1160 M	1170 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4330 M	4090 M	4270 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		98300	97600	92300			

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		89.3	115	113	84.8	95.4	103
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		11.8	<10	<10	16.4	<10	22.9
Aliphatics >C8-C10	<10 µg/kg	TM089		10.6	<10	<10	16.4	<10	29.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	1260	<1000	<1000	2920
Aliphatics >C16-C21	<1000 µg/kg	TM414		11400	<1000	9880	3970	3070	14000
Aliphatics >C21-C35	<1000 µg/kg	TM414		5320	4980	62700	8720	22800	108000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	16400	1080	7170	52800
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		17000	5850	90200	14000	33600	178000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		109000	10200	106000	52200	51800	198000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	10.9	<10	19.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		14500	1030	<1000	7120	4670	4730
Aromatics > EC21-EC35	<1000 µg/kg	TM414		67000	2270	13600	25800	11700	12500
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9070	<1000	<1000	5020	<1000	1590
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1370	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		91800	<5000	15500	38300	18200	19700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		109000	<10000	106000	52300	51800	198000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	52.3
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	52.3

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		72.6	105	80.4	103	110	95.8
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	18	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	35.3	82.8	21.2
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	51.4	116	37
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	18800	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1250	1230	<1000	5390	161000	13400
Aliphatics >C16-C21	<1000 µg/kg	TM414		6110	51200	5810	17300	179000	22500
Aliphatics >C21-C35	<1000 µg/kg	TM414		21100	9890	16500	53300	150000	20200
Aliphatics >C35-C44	<1000 µg/kg	TM414		7780	<1000	1940	22700	16400	2850
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		36200	63000	24500	98700	524000	58900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		137000	73000	89300	115000	718000	73000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	34.2	78	24.3
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	1040	1740	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1220	<1000	<1000	1950	32100	3550
Aromatics > EC16-EC21	<1000 µg/kg	TM414		18700	3820	4900	2360	44400	3220
Aromatics > EC21-EC35	<1000 µg/kg	TM414		70800	4990	50900	9400	104000	6030
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9270	<1000	8570	1420	10900	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1720	<1000	1750	<1000	2170	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		101000	9990	64800	16200	194000	14100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		137000	73000	89300	115000	718000	73100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	86.7	217	58.2
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	78	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	86.7	295	58.2

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		66.9 4	95.3	85.7	101	36.2 4	30.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		43.2 4	<10	11	<10	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		83.8 4	<10	45.1	<10	28.8 4	14.8 4
Aliphatics >C8-C10	<10 µg/kg	TM089		148 4	<10	45.1	<10	46 4	11.4 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		3270	1440	1960	<1000	1980	2630
Aliphatics >C16-C21	<1000 µg/kg	TM414		11000	9490	6420	7270	13800	12100
Aliphatics >C21-C35	<1000 µg/kg	TM414		46000	64500	20900	51100	25200	33300
Aliphatics >C35-C44	<1000 µg/kg	TM414		13300	32900	4250	18200	4530	9690
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		74500	108000	33600	77400	45600	58300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		447000	158000	210000	106000	421000	256000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		98.3 4	<10	30.5	<10	29.9 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		12200	<1000	2820	<1000	5060	5160
Aromatics > EC12-EC16	<1000 µg/kg	TM414		14300	1080	3480	<1000	16900	7030
Aromatics > EC16-EC21	<1000 µg/kg	TM414		104000	10000	30300	6190	128000	39600
Aromatics > EC21-EC35	<1000 µg/kg	TM414		218000	31300	125000	19600	195000	127000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		24100	6460	15200	2600	29900	18900
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5410	1250	2070	<1000	3630	4130
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		372000	49200	177000	28800	375000	197000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		447000	158000	211000	106000	421000	256000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		275 4	<50	101	<50	74.8 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		98.3 4	<50	<50	<50	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		373 4	<20	101	<20	74.8 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		49.2 4	49.1 4	36.4 4	39.5 4	31.1 4	50.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	32.5 4	13.7 4	<10 4	14.6 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	34.8 4	12.5 4	<10 4	13.4 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1050	<1000	1070	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	3750	4140	2460	3710	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1290	14200	20900	14500	15600	3110
Aliphatics >C21-C35	<1000 µg/kg	TM414		4110	36200	45200	31100	43800	10600
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	13200	12200	6550	11000	1840
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		6350	68000	83500	55000	75200	16900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		159000	391000	309000	303000	315000	164000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	23.2 4	<10 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2510	5560	5780	5200	8120	2670
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3860	10400	8860	7720	9860	6080
Aromatics > EC16-EC21	<1000 µg/kg	TM414		32900	81300	49100	48500	49100	27000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		98800	201000	143000	163000	143000	92900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		14500	24800	18300	23700	29200	18700
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1790	5510	3370	2940	5010	2350
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		153000	323000	225000	248000	240000	147000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		159000	392000	309000	303000	315000	164000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	67.3 4	<50 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	67.3 4	<20 4	<20 4	<20 4	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		36.1 4	47.9 4	45.2 4			
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	14.3 4	<10 4			
Aliphatics >C6-C8	<10 µg/kg	TM089		21.7 4	29.7 4	32.8 4			
Aliphatics >C8-C10	<10 µg/kg	TM089		22.8 4	24.2 4	30.4 4			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		4480	4680	4010			
Aliphatics >C16-C21	<1000 µg/kg	TM414		18300	25800	26900			
Aliphatics >C21-C35	<1000 µg/kg	TM414		42100	50200	50800			
Aliphatics >C35-C44	<1000 µg/kg	TM414		12200	14900	10200			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		78000	96700	92400			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		329000	295000	363000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4			
Aromatics >EC8-EC10	<10 µg/kg	TM089		14.8 4	16.5 4	19.9 4			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		6170	5970	7070			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8870	9030	10300			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		52600	40600	60300			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		163000	125000	169000			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		20400	17900	24200			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		2990	2720	3480			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		251000	198000	271000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		329000	295000	363000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	68.2 4	63.2 4			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4			
GRO >C5-C10	<20 µg/kg	TM089		<20 4	68.2 4	63.2 4			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Dibromofluoromethane**	%	TM116		113	110	104	106	108	103
Toluene-d8**	%	TM116		98.4	98.8	97.3	96.3	97.8	97.6
4-Bromofluorobenzene**	%	TM116		92.5	98.3	95.2	93.8	97.2	97.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 #	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	109	110	112	103	106
Toluene-d8**	%	TM116		99.2	98.6	99.1	99.2	96.3	103
4-Bromofluorobenzene**	%	TM116		93.3	99.5	95.4	96.7	87.9	95.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	1200 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	102	99.8	103	88.7	96.2
Toluene-d8**	%	TM116		95.4	96.1	96.4	96.9	90.4	96.5
4-Bromofluorobenzene**	%	TM116		89.9	96.8	85.3	96.7	74.3	84
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		1410 M	<260 M	1710 M	<260 M	1680 M	819 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Dibromofluoromethane**	%	TM116		96.9	97.9	92.6	94.8	89.2	103
Toluene-d8**	%	TM116		96.9	95.1	93.2	95	95.2	96.2
4-Bromofluorobenzene**	%	TM116		82.9	82.6	78.8	82.9	80.1	89.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		948 M	651 M	1270 M	806 M	1310 M	368 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547983	23548001	23548010
			AGS Reference			
Dibromofluoromethane**	%	TM116		101	94.8	97
Toluene-d8**	%	TM116		97.2	94	95
4-Bromofluorobenzene**	%	TM116		89.3	81.4	80.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		491 M	839 M	1240 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL24-1 0.70 - 0.70 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547855 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AM33-1 0.30 - 0.30 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547873 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AN23-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547829 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO27-1 0.60 - 0.60 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548024 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO29-1 0.50 - 0.50 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547788 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ24-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548085 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ25-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548065 TM048	22/01/21	Andrzej Ferfecki	loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ26-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548044 TM048	21/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-1 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547887 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-3 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547907 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-5 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547935 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-7 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547958 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-9 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547983 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W168-11 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548010 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AQ25-1	Chrysotile detected. (#)	Fibre bundles in soil.	0.0083 (#)	<0.001 (#)	0.0083 (#)
Depth (m)	0.20 - 0.20					
Sample Type	SOLID					
Date Sampled	13/01/2021 00:00:00					
Date Received	15/01/2021 05:00:00					
SDG	210115-27					
Original Sample	23548065					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Test Completion Dates

Lab Sample No(s)	23547855	23547865	23547873	23547879	23547829	23547841	23548024	23548034	23547788	23547917
Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2	AO27-1	AO27-2	AO29-1	AO29-2
AGS Ref.										
Depth	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	22-Jan-2021		22-Jan-2021		21-Jan-2021		21-Jan-2021		22-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	20-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	22-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
PAH by GCMS	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	28-Jan-2021	25-Jan-2021	22-Jan-2021	22-Jan-2021
Sample description	18-Jan-2021	16-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23548085	23547819	23548065	23548075	23548044	23548052	23547887	23547896	23547907	23547927
Customer Sample Ref.	AQ24-1	AQ24-2	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2	W168-3	W168-4
AGS Ref.										
Depth	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	21-Jan-2021		22-Jan-2021		21-Jan-2021		22-Jan-2021		22-Jan-2021	
Asbestos Quantification - Full			28-Jan-2021							
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021	25-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021
Sample description	18-Jan-2021	18-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23547935	23547942	23547958	23547970	23547983	23548001	23548010
Customer Sample Ref.	W168-5	W168-6	W168-7	W168-8	W168-9	W168-10	W168-11
AGS Ref.							
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	21-Jan-2021		21-Jan-2021		21-Jan-2021		21-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	25-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021	22-Jan-2021
Sample description	18-Jan-2021	18-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	16-Jan-2021	18-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Deeside
CH5 3US
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210127-42
Your Reference:	P18-669
Location:	Llanwern
Report No:	586164

This report has been revised and directly supersedes 585603 in its entirety.

We received 18 samples on Wednesday January 27, 2021 and 18 of these samples were scheduled for analysis which was completed on Tuesday February 09, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23613950	P16-1		0.30 - 0.30	26/01/2021
23613957	P16-2		1.30 - 1.30	26/01/2021
23613928	P17-1		0.30 - 0.30	26/01/2021
23613934	P17-2		1.50 - 1.50	26/01/2021
23613939	Q17-1		0.30 - 0.30	26/01/2021
23613943	Q17-2		1.50 - 1.50	26/01/2021
23613920	Q18-1		0.30 - 0.30	26/01/2021
23613924	Q18-2		1.50 - 1.50	26/01/2021
23614011	R18-1		0.60 - 0.60	26/01/2021
23613914	R18-2		1.80 - 1.80	26/01/2021
23613985	R19-1		0.40 - 0.40	26/01/2021
23613991	R19-2		1.20 - 1.20	26/01/2021
23614001	R19-3		2.50 - 2.50	26/01/2021
23613973	R20-1		0.50 - 0.50	26/01/2021
23613979	R20-2		1.60 - 1.60	26/01/2021
23613902	V4-1		1.15 - 1.15	25/01/2021
23613963	V5-1		0.50 - 0.50	25/01/2021
23613968	V5-2		1.50 - 1.50	25/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23613950		23613957		23613928		23613934		23613939		23613943		23613920		23613924	
Customer Sample Reference			P16-1		P16-2		P17-1		P17-2		Q17-1		Q17-2		Q18-1		Q18-2	
AGS Reference																		
Depth (m)			0.30 - 0.30		1.30 - 1.30		0.30 - 0.30		1.50 - 1.50		0.30 - 0.30		1.50 - 1.50		0.30 - 0.30		1.50 - 1.50	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 9	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2																X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 18			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 14		X							X			X							X
Total Organic Carbon	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 18			X		X			X		X			X		X			X	

23613902	V4-1		1.15 - 1.15	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x	x															
23613979	R20-2		1.60 - 1.60	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23613973	R20-1		0.50 - 0.50	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x			x	x			
23614001	R19-3		2.50 - 2.50	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23613991	R19-2		1.20 - 1.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23613985	R19-1		0.40 - 0.40	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23613914	R18-2		1.80 - 1.80	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23614011	R18-1		0.60 - 0.60	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23613924	Q18-2		1.50 - 1.50	60g VOC (ALE215)	S								x										x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23613963					23613968
Customer Sample Reference			V5-1					V5-2
AGS Reference								
Depth (m)			0.50 - 0.50					1.50 - 1.50
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	
Sample Type			S	S	S	S	S	
Ammonium Soil by Titration	All	NDPs: 0 Tests: 18	X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 9			X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18	X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 18	X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 18		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 18	X			X		
PAH by GCMS	All	NDPs: 0 Tests: 18	X			X		
pH	All	NDPs: 0 Tests: 18	X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 18	X			X		
Sample description	All	NDPs: 0 Tests: 14	X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 18	X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 18	X			X		
VOC MS (S)	All	NDPs: 0 Tests: 18		X			X	

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23613950	P16-1	0.30 - 0.30	Grey	Sand	Stones	None
23613957	P16-2	1.30 - 1.30	Grey	Sand	Stones	N/A
23613928	P17-1	0.30 - 0.30	Black	Sandy Loam	Stones	N/A
23613934	P17-2	1.50 - 1.50	Black	Loamy Sand	Stones	None
23613939	Q17-1	0.30 - 0.30	Dark Brown	Sand	None	Stones
23613943	Q17-2	1.50 - 1.50	Grey	Sand	Stones	N/A
23613920	Q18-1	0.30 - 0.30	Dark Brown	Sandy Loam	Vegetation	Brick
23613924	Q18-2	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23614011	R18-1	0.60 - 0.60	Dark Brown	Loamy Sand	Stones	Brick
23613914	R18-2	1.80 - 1.80	Dark Brown	Sand	None	Stones
23613985	R19-1	0.40 - 0.40	Dark Brown	Sand	Stones	None
23613991	R19-2	1.20 - 1.20	Dark Brown	Sand	Stones	Brick
23614001	R19-3	2.50 - 2.50	Dark Brown	Sand	None	Stones
23613973	R20-1	0.50 - 0.50	Dark Brown	Loamy Sand	Vegetation	Brick
23613979	R20-2	1.60 - 1.60	Dark Brown	Loamy Sand	Stones	Vegetation
23613902	V4-1	1.15 - 1.15	Grey	Sand	Stones	Concrete/Aggregate
23613963	V5-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23613968	V5-2	1.50 - 1.50	Grey	Sand	Stones	N/A

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.6	10	8.9	15	9.8	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0111 M	0.0116 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0109 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0232 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		18.8 #	2.16 #	>100 #	20.3 #	22.8 #	21.9 #
pH	1 pH Units	TM133		12.4 M	12.6 M	11.1 M	11.9 M	12.5 M	12.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	6.63 M	1.59 M	2.35 M	<1 M
Arsenic	<0.6 mg/kg	TM181		78.6 M	<6 M	<6 M	<6 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.628 M	0.619 M	0.568 M	<0.2 M	0.685 M
Chromium	<0.9 mg/kg	TM181		378 M	546 M	123 M	506 M	522 M	426 M
Copper	<1.4 mg/kg	TM181		54.4 M	22.5 M	15.7 M	<14 M	16.3 M	28.9 M
Iron	<1000 mg/kg	TM181		144000 #	127000 #	39700 #	104000 #	139000 #	114000 #
Lead	<0.7 mg/kg	TM181		55.2 M	10.1 M	37.2 M	<7 M	26.4 M	25 M
Manganese	<0.13 mg/kg	TM181		93900 M	27400 M	8480 M	21400 M	24900 M	28600 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		50.8 M	8.48 M	8.82 M	<2 M	12.6 M	14.9 M
Selenium	<1 mg/kg	TM181		71.3 #	12.7 #	<10 #	<10 #	19 #	14.7 #
Vanadium	<0.2 mg/kg	TM181		416 #	473 #	118 #	451 #	416 #	475 #
Zinc	<1.9 mg/kg	TM181		95.3 M	51.7 M	161 M	39.1 M	54.8 M	106 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.1	14	7.7	17	17	7.4
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	15.6 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0108 M	0.0117 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.65 #	49.3 #	7.29 #	8.69 #	4.53 #	5.74 #
pH	1 pH Units	TM133		10.5 M	11.4 M	11.1 M	10.9 M	9.86 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		13.8 M	6.15 M	9.32 M	12.1 M	14.7 M	7.6 M
Cadmium	<0.02 mg/kg	TM181		0.687 M	0.882 M	0.432 M	0.221 M	1.27 M	0.261 M
Chromium	<0.9 mg/kg	TM181		103 M	61.5 M	58.1 M	45.8 M	21 M	32 M
Copper	<1.4 mg/kg	TM181		21.4 M	14.3 M	22.1 M	32.4 M	22.9 M	14.3 M
Iron	<1000 mg/kg	TM181		77200 #	104000 #	66600 #	33700 #	160000 #	25700 #
Lead	<0.7 mg/kg	TM181		73.3 M	55.3 M	52.2 M	29.8 M	182 M	18.2 M
Manganese	<0.13 mg/kg	TM181		10600 M	5430 M	4170 M	2950 M	5620 M	2130 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		21.7 M	12.7 M	20.2 M	24.4 M	12.5 M	14.2 M
Selenium	<1 mg/kg	TM181		10.1 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		243 #	113 #	95.3 #	61.3 #	82.8 #	72.5 #
Zinc	<1.9 mg/kg	TM181		254 M	137 M	137 M	48.6 M	461 M	55.5 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		N/A					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	7.3	16	9.5	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0108 M	<0.01 M	0.0111 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		22.6 #	2.17 #	51.9 #	18.3 #	76.2 #	70.9 #
pH	1 pH Units	TM133		11.3 M	10.9 M	11.1 M	12.4 M	11.2 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	7.83 M	<1 M	4.43 M
Arsenic	<0.6 mg/kg	TM181		10.8 M	21.4 M	10 M	18.1 M	<6 M	8.39 M
Cadmium	<0.02 mg/kg	TM181		0.244 M	0.956 M	0.372 M	0.425 M	0.544 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		30 M	101 M	211 M	411 M	151 M	443 M
Copper	<1.4 mg/kg	TM181		16.4 M	38.4 M	22.6 M	63.8 M	22.6 M	27.2 M
Iron	<1000 mg/kg	TM181		35900 #	103000 #	121000 #	288000 #	59900 #	93500 #
Lead	<0.7 mg/kg	TM181		26.8 M	107 M	80.6 M	93.9 M	26.2 M	29.7 M
Manganese	<0.13 mg/kg	TM181		2790 M	7530 M	9260 M	25800 M	11900 M	26700 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		16.7 M	22.9 M	21.7 M	54.2 M	8.64 M	16 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	18.2 #	<10 #	22.3 #
Vanadium	<0.2 mg/kg	TM181		68.5 #	130 #	370 #	651 #	210 #	1020 #
Zinc	<1.9 mg/kg	TM181		108 M	366 M	188 M	378 M	125 M	226 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					N/A		
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.4	82.5	84.3	85.1	84.7	79.4
Acenaphthene-d10 % recovery**	%	TM218		87.4	83.1	87.1	84.9	85.7	82
Phenanthrene-d10 % recovery**	%	TM218		86.6	82.1	81.6	83.4	90	79.1
Chrysene-d12 % recovery**	%	TM218		78.3	75.4	66.6	71.1	89.4	79.3
Perylene-d12 % recovery**	%	TM218		76.9	75	52.6	62.5	87.5	80.8
Naphthalene	<9 µg/kg	TM218		776 M	386 M	3080 M	2440 M	2760 M	24100 M
Acenaphthylene	<12 µg/kg	TM218		367 M	262 M	<12 M	468 M	607 M	14100 M
Acenaphthene	<8 µg/kg	TM218		14.5 M	19.7 M	127 M	85.1 M	76.1 M	880 M
Fluorene	<10 µg/kg	TM218		83.7 M	153 M	941 M	644 M	313 M	16500 M
Phenanthrene	<15 µg/kg	TM218		2430 M	3040 M	6200 M	3590 M	3390 M	60800 M
Anthracene	<16 µg/kg	TM218		432 M	1220 M	1560 M	677 M	747 M	20900 M
Fluoranthene	<17 µg/kg	TM218		1780 M	3660 M	8910 M	3030 M	5540 M	58300 M
Pyrene	<15 µg/kg	TM218		1130 M	2400 M	6700 M	2020 M	4030 M	39100 M
Benz(a)anthracene	<14 µg/kg	TM218		563 M	1560 M	<14 M	1010 M	2690 M	20300 M
Chrysene	<10 µg/kg	TM218		460 M	1320 M	3090 M	974 M	2470 M	16900 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		386 M	1530 M	4240 M	1160 M	2560 M	20400 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		189 M	562 M	<14 M	339 M	1240 M	7620 M
Benzo(a)pyrene	<15 µg/kg	TM218		349 M	1060 M	<15 M	670 M	2310 M	15300 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		285 M	859 M	1750 M	527 M	1940 M	12200 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		56.2 M	157 M	391 M	102 M	427 M	2120 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		225 M	653 M	<24 M	366 M	1880 M	10000 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9530	18800	37000	18100	33000	340000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90	84.3	78.3	85.7	83.4	86.2
Acenaphthene-d10 % recovery**	%	TM218		90.8	84.6	78.9	87.4	83.8	87.4
Phenanthrene-d10 % recovery**	%	TM218		90.1	84.8	77.5	78.5	85.7	86.1
Chrysene-d12 % recovery**	%	TM218		80.5	75.6	72	40.3	78.3	76.6
Perylene-d12 % recovery**	%	TM218		80.8	68.3	70.4	20.6	74.9	76.8
Naphthalene	<9 µg/kg	TM218		286 M	4560 M	269 M	126 M	178 M	19.5 M
Acenaphthylene	<12 µg/kg	TM218		77.7 M	1980 M	<60 M	23 M	35.8 M	<12 M
Acenaphthene	<8 µg/kg	TM218		23.6 M	405 M	102 M	27.9 M	15.9 M	<8 M
Fluorene	<10 µg/kg	TM218		93.3 M	4350 M	176 M	38.6 M	37.2 M	<10 M
Phenanthrene	<15 µg/kg	TM218		498 M	14800 M	974 M	209 M	282 M	46.7 M
Anthracene	<16 µg/kg	TM218		120 M	3960 M	241 M	52 M	60.2 M	<16 M
Fluoranthene	<17 µg/kg	TM218		685 M	15300 M	1340 M	244 M	332 M	41.2 M
Pyrene	<15 µg/kg	TM218		499 M	12900 M	1140 M	195 M	270 M	31.8 M
Benz(a)anthracene	<14 µg/kg	TM218		307 M	8840 M	922 M	100 M	182 M	24.2 M
Chrysene	<10 µg/kg	TM218		257 M	7310 M	789 M	88.7 M	174 M	24.8 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		245 M	9840 M	676 M	98.2 M	281 M	22.5 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		140 M	3590 M	315 M	37.7 M	83.3 M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		256 M	6160 M	635 M	53 M	160 M	20.2 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		231 M	5420 M	410 M	39.2 M	158 M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		40.2 M	1130 M	<115 M	<23 M	29.9 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		185 M	3920 M	360 M	29.4 M	123 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3950	104000	8350	1360	2400	231

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.1	84.7	79.2	87.1	82.6	87.3
Acenaphthene-d10 % recovery**	%	TM218		84.2	87.1	80.6	89.2	84.4	86.4
Phenanthrene-d10 % recovery**	%	TM218		86.1	86.9	78.9	86.1	83.3	82.8
Chrysene-d12 % recovery**	%	TM218		83.7	78.9	73	76.6	69.9	68.4
Perylene-d12 % recovery**	%	TM218		82	81.4	71.4	76.2	58.9	60.5
Naphthalene	<9 µg/kg	TM218		67.4 M	1790 M	800 M	409 M	817 M	573 M
Acenaphthylene	<12 µg/kg	TM218		18.3 M	330 M	183 M	150 M	183 M	48.3 M
Acenaphthene	<8 µg/kg	TM218		<8 M	84.5 M	64.2 M	46.3 M	32.2 M	28.6 M
Fluorene	<10 µg/kg	TM218		21.6 M	361 M	192 M	195 M	170 M	94.8 M
Phenanthrene	<15 µg/kg	TM218		156 M	2500 M	1350 M	1440 M	1500 M	559 M
Anthracene	<16 µg/kg	TM218		35.2 M	599 M	289 M	292 M	355 M	92.3 M
Fluoranthene	<17 µg/kg	TM218		221 M	3120 M	1980 M	2260 M	2120 M	576 M
Pyrene	<15 µg/kg	TM218		161 M	2190 M	1380 M	1740 M	1580 M	494 M
Benz(a)anthracene	<14 µg/kg	TM218		104 M	1240 M	939 M	1250 M	1010 M	303 M
Chrysene	<10 µg/kg	TM218		102 M	1160 M	818 M	1280 M	929 M	321 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		78.3 M	859 M	1150 M	1640 M	1580 M	566 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		34.8 M	540 M	367 M	733 M	455 M	169 M
Benzo(a)pyrene	<15 µg/kg	TM218		86.7 M	992 M	734 M	1310 M	789 M	278 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		73.3 M	901 M	563 M	1200 M	778 M	277 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	149 M	<115 M	237 M	163 M	60.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		78.1 M	706 M	479 M	1010 M	603 M	228 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1240	17500	11300	15200	13100	4670

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		102	61.5 4	2.8 4	15.5 4	9.6 4	77.2
Aliphatics >C5-C6	<10 µg/kg	TM089		35	32.2 4	<10 4	23.4 4	13.3 4	26.7
Aliphatics >C6-C8	<10 µg/kg	TM089		42.7	72.2 4	19.8 4	53.8 4	30 4	45.2
Aliphatics >C8-C10	<10 µg/kg	TM089		93	54.4 4	<10 4	38.6 4	15.5 4	49.9
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	6160	7940	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1640	<1000	9650	9850	2100	2800
Aliphatics >C16-C21	<1000 µg/kg	TM414		5250	3980	9640	7450	11800	6860
Aliphatics >C21-C35	<1000 µg/kg	TM414		38900	31300	23500	36500	118000	78500
Aliphatics >C35-C44	<1000 µg/kg	TM414		9520	6170	4550	8510	24400	56300
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		56000	42600	53500	70300	157000	145000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		89800	62700	140000	150000	223000	391000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10 4	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	16.7 4	<10 4	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		61.3	35.5 4	<10 4	25.7 4	<10 4	33.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1400	<1000	1750	4050	1760	9430
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3020	<1000	13600	12900	2250	21000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		13700	6530	23900	26700	16000	76100
Aromatics > EC21-EC35	<1000 µg/kg	TM414		14700	11700	44500	34500	41900	126000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	2690	1350	4040	13100
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1710
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		33800	20100	86400	79500	65900	246000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		90000	62900	140000	150000	223000	391000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		171	159 4	<50 4	116 4	58.8 4	122
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		61.3	52.2 4	<50 4	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		232	211 4	<20 4	116 4	58.8 4	122

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		106	5.4 4	11.7 4	80.9	74.3	81.5
Aliphatics >C5-C6	<10 µg/kg	TM089		26.9	19.9 4	<10 4	10.9	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		37.7	53.8 4	10.8 4	52	<10	16.2
Aliphatics >C8-C10	<10 µg/kg	TM089		40.9	35.1 4	<10 4	252	<10	32.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	5100	<1000	4650	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	11200	3770	19700	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		3810	29800	9540	81100	6890	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		16100	112000	31000	241000	25800	<1000
Aliphatics >C35-C44	<1000 µg/kg	TM414		5060	35000	7110	34800	4970	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		26300	193000	52200	381000	38800	<5000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		44800	382000	92700	429000	52700	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10 4	10.9	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10 4	10.9	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		28	23.4 4	<10 4	168	<10	21.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	5240	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	17800	3550	1070	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		3110	54100	8580	2380	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		13700	105000	26100	41900	11900	<1000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1060	5760	1950	2170	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		18500	188000	40500	47700	13900	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		44900	382000	92700	429000	52700	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		106	109 4	<50 4	315	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50 4	190	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		106	109 4	<20 4	505	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		83.2	82.9	26.1 4	57.1 4	29.3 4	13.3 4
Aliphatics >C5-C6	<10 µg/kg	TM089		20.2	17.2	72 4	21.1 4	24.4 4	57.6 4
Aliphatics >C6-C8	<10 µg/kg	TM089		25.2	20.5	223 4	37.7 4	51.1 4	177 4
Aliphatics >C8-C10	<10 µg/kg	TM089		60.5	18.3	96 4	21.1 4	30 4	73.5 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1590	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	3340	9340	6470	2480	9220
Aliphatics >C16-C21	<1000 µg/kg	TM414		5610	12700	22000	33700	31700	73500
Aliphatics >C21-C35	<1000 µg/kg	TM414		21500	47700	100000	345000	38100	58300
Aliphatics >C35-C44	<1000 µg/kg	TM414		3090	17300	31200	140000	8420	21200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		31100	81200	164000	525000	81200	163000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		40300	129000	215000	613000	144000	283000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	30 4	<10 4	<10 4	56.5 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	58.8 4	<10 4	12.2 4	52 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		40.3	11.9	63.6 4	14.4 4	20 4	49.7 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	1830	<1000	<1000	<1000	8770
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1940	7130	3980	3650	13300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	8290	10100	9830	12500	35200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		7870	31400	30800	70100	44000	60600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	4020	1330	3270	1660	2360
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1090	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		9200	47500	50200	87600	62500	120000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		40500	129000	215000	613000	144000	284000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		106	56.1	391 4	79.9 4	105 4	308 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	152 4	<50 4	<50 4	158 4
GRO >C5-C10	<20 µg/kg	TM089		106	56.1	544 4	79.9 4	105 4	467 4

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	108	106	105	94.9	106
Toluene-d8**	%	TM116		96.4	97.4	94.6	97.7	87.8	97.1
4-Bromofluorobenzene**	%	TM116		93.3	99.8	83.8	92.2	73.6	96.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<2000 M	<2000 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<1800 M	<1800 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<1400 M	<1400 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<800 M	<800 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<2000 #	<2000 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<2000 M	<2000 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<2600 M	<2600 M	443 M	547 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<4	<4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<8000	<8000	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	106	105	119	104	119
Toluene-d8**	%	TM116		98.1	97.4	94.9	96.8	97.8	97.1
4-Bromofluorobenzene**	%	TM116		93.5	92.3	86.7	83.9	96.3	93.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<2000 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<1800 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<1400 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<800 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<2000 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<2000 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<2600 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<8000	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Dibromofluoromethane**	%	TM116		110	108	94.5	106	101	102
Toluene-d8**	%	TM116		96.6	97.4	91.5	99.3	95.1	94.8
4-Bromofluorobenzene**	%	TM116		97.4	99	76.8	89.9	76.5	79.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	168 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	550 M	363 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P16-1 0.30 - 0.30 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613950 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P17-1 0.30 - 0.30 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613928 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q17-1 0.30 - 0.30 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613939 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q18-1 0.30 - 0.30 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613920 TM048	03/02/2021	James Richards	Fibre bundle in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	R18-1 0.60 - 0.60 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23614011 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	R19-2 1.20 - 1.20 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613991 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	R20-2 1.60 - 1.60 SOLID 26/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613979 TM048	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	V4-1 1.15 - 1.15 SOLID 25/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613902 TM048	03/02/2021	James Richards	Fibre bundle in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	V5-2 1.50 - 1.50 SOLID 25/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613968 TM048	03/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	Q18-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.30 - 0.30					
Sample Type	SOLID					
Date Sampled	26/01/2021 00:00:00					
Date Received	27/01/2021 05:00:00					
SDG	210127-42					
Original Sample	23613920					
Method Number	TM304					
Cust. Sample Ref.	V4-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.15 - 1.15					
Sample Type	SOLID					
Date Sampled	25/01/2021 00:00:00					
Date Received	27/01/2021 05:00:00					
SDG	210127-42					
Original Sample	23613902					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Test Completion Dates

Lab Sample No(s)	23613950	23613957	23613928	23613934	23613939	23613943	23613920	23613924	23614011	23613914
Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2	Q18-1	Q18-2	R18-1	R18-2
AGS Ref.										
Depth	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
Asbestos ID in Solid Samples	03-Feb-2021		03-Feb-2021		03-Feb-2021		03-Feb-2021		03-Feb-2021	
Asbestos Quantification - Full							09-Feb-2021			
Cyanide Comp/Free/Total/Thiocyanate	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
EPH CWG GC (S)	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
GRO by GC-FID (S)	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
Metals in solid samples by OES	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
PAH by GCMS	29-Jan-2021	29-Jan-2021	02-Feb-2021	02-Feb-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	02-Feb-2021	29-Jan-2021	02-Feb-2021
pH	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021
Phenols by HPLC (S)	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
Sample description	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021
Total Organic Carbon	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021
TPH CWG GC (S)	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
VOC MS (S)	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021

Lab Sample No(s)	23613985	23613991	23614001	23613973	23613979	23613902	23613963	23613968
Customer Sample Ref.	R19-1	R19-2	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
AGS Ref.								
Depth	0.40 - 0.40	1.20 - 1.20	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
Asbestos ID in Solid Samples		03-Feb-2021			03-Feb-2021	03-Feb-2021		03-Feb-2021
Asbestos Quantification - Full						09-Feb-2021		
Cyanide Comp/Free/Total/Thiocyanate	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021
EPH CWG GC (S)	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
GRO by GC-FID (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
Metals in solid samples by OES	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
PAH by GCMS	02-Feb-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	02-Feb-2021	02-Feb-2021
pH	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021
Phenols by HPLC (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	29-Jan-2021	03-Feb-2021	03-Feb-2021
Sample description	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021
Total Organic Carbon	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
TPH CWG GC (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
VOC MS (S)	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021	03-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Deeside
CH5 3US
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Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	16 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210129-39
Your Reference:	P18-669
Location:	Llanwern
Report No:	586994

This report has been revised and directly supersedes 586360 in its entirety.

We received 19 samples on Friday January 29, 2021 and 19 of these samples were scheduled for analysis which was completed on Tuesday February 16, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23630284	AG30-1		0.50 - 0.50	28/01/2021
23630288	AG30-2		1.30 - 1.30	28/01/2021
23630297	AG31-1		0.30 - 0.30	28/01/2021
23630306	AG31-2		1.20 - 1.20	28/01/2021
23630255	AH29-1		0.30 - 0.30	28/01/2021
23630262	AH29-2		1.60 - 1.60	28/01/2021
23630239	AH30-1		0.20 - 0.20	28/01/2021
23630248	AH30-2		1.40 - 1.40	28/01/2021
23630211	AH31-1		0.50 - 0.50	28/01/2021
23630215	AH31-2		1.70 - 1.70	28/01/2021
23630227	AI30-1		0.30 - 0.30	28/01/2021
23630232	AI30-2		1.80 - 1.80	28/01/2021
23630219	AI31-1		0.50 - 0.50	28/01/2021
23630223	AI31-2		1.50 - 1.50	28/01/2021
23630206	T6-1		0.50 - 0.50	27/01/2021
23630267	T6-2		0.00 - 1.50	27/01/2021
23630280	T6-3		2.20 - 2.20	27/01/2021
23630271	T7-1		0.50 - 0.50	27/01/2021
23630275	T7-2		1.20 - 1.20	27/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23630284		23630288		23630297		23630306		23630255		23630262		23630239		23630248				
Customer Sample Reference			AG30-1		AG30-2		AG31-1		AG31-2		AH29-1		AH29-2		AH30-1		AH30-2				
AGS Reference																					
Depth (m)			0.50 - 0.50		1.30 - 1.30		0.30 - 0.30		1.20 - 1.20		0.30 - 0.30		1.60 - 1.60		0.20 - 0.20		1.40 - 1.40				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10			X					X					X					X	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19		X			X		X			X		X			X		X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
PAH by GCMS	All	NDPs: 0 Tests: 18				X		X			X		X			X		X			X
pH	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
Sample description	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
Total Organic Carbon	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X			X
VOC MS (S)	All	NDPs: 0 Tests: 19		X			X		X			X		X			X		X		

23630267	T6-2		0.00 - 1.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23630206	T6-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23630223	AI31-2		1.50 - 1.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23630219	AI31-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23630232	AI30-2		1.80 - 1.80	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23630227	AI30-1		0.30 - 0.30	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23630215	AH31-2		1.70 - 1.70	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23630211	AH31-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23630248	AH30-2		1.40 - 1.40	60g VOC (ALE215)	S						X								X

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	23630280			23630271			23630275	
			Customer Sample Reference	T6-3			T7-1			T7-2	
			AGS Reference								
			Depth (m)	2.20 - 2.20			0.50 - 0.50			1.20 - 1.20	
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19			X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10		X			X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19			X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 19			X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19				X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 19			X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 18			X			X		X	
pH	All	NDPs: 0 Tests: 19			X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19			X			X		X	
Sample description	All	NDPs: 0 Tests: 19			X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 19			X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 19			X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 19				X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23630284	AG30-1	0.50 - 0.50	Black	Sand	Stones	None
23630288	AG30-2	1.30 - 1.30	Dark Brown	Sand	Stones	None
23630297	AG31-1	0.30 - 0.30	Dark Brown	Sand	Stones	Vegetation
23630306	AG31-2	1.20 - 1.20	Dark Brown	Loamy Sand	Stones	N/A
23630255	AH29-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	Vegetation
23630262	AH29-2	1.60 - 1.60	Dark Brown	Sand	Stones	None
23630239	AH30-1	0.20 - 0.20	Dark Brown	Sandy Clay	Stones	Vegetation
23630248	AH30-2	1.40 - 1.40	Dark Brown	Sand	Stones	Vegetation
23630211	AH31-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Fibres
23630215	AH31-2	1.70 - 1.70	Dark Brown	Sandy Loam	Stones	N/A
23630227	AI30-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23630232	AI30-2	1.80 - 1.80	Dark Brown	Sand	Stones	None
23630219	AI31-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	N/A
23630223	AI31-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23630206	T6-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23630267	T6-2	0.00 - 1.50	Black	Sand	Stones	None
23630280	T6-3	2.20 - 2.20	Black	Sand	Stones	None
23630271	T7-1	0.50 - 0.50	Black	Chalk	Stones	Vegetation
23630275	T7-2	1.20 - 1.20	Black	N/A	Coal fragments	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	9.5	6.7	11	13	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		76 #	4.76 #	3.53 #	0.436 #	13.8 #	13.8 #
pH	1 pH Units	TM133		9.4 M	8.91 M	8.98 M	7.94 M	10.6 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		14 M	6.07 M	<6 M	16.2 M	8.79 M	6.58 M
Cadmium	<0.02 mg/kg	TM181		2.04 M	0.584 M	0.33 M	0.927 M	1.77 M	1.52 M
Chromium	<0.9 mg/kg	TM181		15.6 M	20.5 M	13.2 M	26.1 M	158 M	615 M
Copper	<1.4 mg/kg	TM181		31.4 M	22 M	<14 M	27 M	34.5 M	15.1 M
Iron	<1000 mg/kg	TM181			40100 #			151000 #	169000 #
Lead	<0.7 mg/kg	TM181		45.7 M	13.1 M	13 M	31 M	58.1 M	24.8 M
Manganese	<0.13 mg/kg	TM181		4270 M	1140 M	3600 M	1900 M	10900 M	38400 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		32 M	34.5 M	2.79 M	61 M	23.6 M	12.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	18 #
Vanadium	<0.2 mg/kg	TM181		65.5 #	34.1 #	17.2 #	57.8 #	216 #	483 #
Zinc	<1.9 mg/kg	TM181		129 M	56.5 M	37.8 M	102 M	204 M	72.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
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aq	Aqueous / settled sample.
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*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	11	9.8	12	12	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.28 #	7.6 #	11.3 #	6.91 #	3.86 #	8.36 #
pH	1 pH Units	TM133		8.63 M	9.7 M	9.75 M	10.5 M	9.97 M	10.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	2.13 M
Arsenic	<0.6 mg/kg	TM181		10.3 M	65 M	9.28 M	7.6 M	6.78 M	<6 M
Cadmium	<0.02 mg/kg	TM181		0.419 M	4.47 M	0.902 M	0.626 M	0.861 M	0.689 M
Chromium	<0.9 mg/kg	TM181		23.4 M	397 M	52.9 M	39.1 M	144 M	50.7 M
Copper	<1.4 mg/kg	TM181		19.2 M	220 M	20.5 M	27.7 M	14.4 M	21.8 M
Iron	<1000 mg/kg	TM181		27800 #	397000 #	40900 #	40600 #	82800 #	44500 #
Lead	<0.7 mg/kg	TM181		27.5 M	95.3 M	48.9 M	33 M	15.9 M	50.1 M
Manganese	<0.13 mg/kg	TM181		1180 M	34200 M	3580 M	3130 M	13500 M	2670 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		24.1 M	168 M	17.5 M	19.5 M	14.1 M	12.7 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	11.8 #	<10 #
Vanadium	<0.2 mg/kg	TM181		28.7 #	469 #	96.8 #	89.8 #	370 #	73 #
Zinc	<1.9 mg/kg	TM181		135 M	514 M	124 M	90.6 M	77.7 M	183 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							0.0018 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							<0.001 #
Additional Asbestos Components (Using TM048)		TM304							None #
Analysts Comments		TM304							N/A
Asbestos Quantification - Total - %	<0.001 %	TM304							0.0018 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	5.9	4.9	10	5.2
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 #
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0116 M	0.0106 M	<0.01 M	0.0112 M	<0.01 #
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #
Soil Organic Matter (SOM)	<0.35 %	TM132		12.8 #	10.7 #	6.71 #	10.2 #	4.14 #	1.42 #
pH	1 pH Units	TM133		11.3 M	11.2 M	12.6 M	12.8 M	12.7 M	12.5 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Arsenic	<0.6 mg/kg	TM181		8.19 M	7.92 M	<6 M	<6 M	<6 M	<6 #
Cadmium	<0.02 mg/kg	TM181		1.98 M	2.13 M	1.65 M	1.27 M	1.51 M	1.03 #
Chromium	<0.9 mg/kg	TM181		145 M	159 M	549 M	461 M	550 M	565 #
Copper	<1.4 mg/kg	TM181		18.4 M	15 M	17.7 M	20.3 M	26.5 M	<14 #
Iron	<1000 mg/kg	TM181		119000 #	137000 #	157000 #	153000 #	126000 #	149000 #
Lead	<0.7 mg/kg	TM181		152 M	147 M	<7 M	<7 M	25.3 M	9.34 #
Manganese	<0.13 mg/kg	TM181		18700 M	12800 M	24500 M	31200 M	27100 M	37000 #
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 #
Nickel	<0.2 mg/kg	TM181		16.4 M	14.7 M	8.24 M	14.7 M	10.5 M	6.07 #
Selenium	<1 mg/kg	TM181		12.4 #	<10 #	13.9 #	20.3 #	15.1 #	22.8 #
Vanadium	<0.2 mg/kg	TM181		422 #	310 #	632 #	636 #	631 #	503 #
Zinc	<1.9 mg/kg	TM181		459 M	415 M	28.9 M	45.6 M	49.6 M	52.7 #

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	T7-2
Depth (m)	1.20 - 1.20
Sample Type	Soil/Solid (S)
Date Sampled	27/01/2021
Sample Time	.
Date Received	29/01/2021
SDG Ref	210129-39
Lab Sample No.(s)	23630275
AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	9
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 #
Phenol	<0.01 mg/kg	TM062 (S)	0.011
Cresols	<0.01 mg/kg	TM062 (S)	<0.01
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035
Soil Organic Matter (SOM)	<0.35 %	TM132	90.3 #
pH	1 pH Units	TM133	12.1
Cyanide, Total	<1 mg/kg	TM153	<1
Arsenic	<0.6 mg/kg	TM181	<6
Cadmium	<0.02 mg/kg	TM181	0.885
Chromium	<0.9 mg/kg	TM181	297
Copper	<1.4 mg/kg	TM181	<14
Iron	<1000 mg/kg	TM181	95000
Lead	<0.7 mg/kg	TM181	<7
Manganese	<0.13 mg/kg	TM181	18600 #
Mercury	<0.1 mg/kg	TM181	<1.4
Nickel	<0.2 mg/kg	TM181	6.66
Selenium	<1 mg/kg	TM181	11.7
Vanadium	<0.2 mg/kg	TM181	246
Zinc	<1.9 mg/kg	TM181	66

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2	AH30-1
			Depth (m)	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630288	23630297	23630306	23630255	23630262	23630239
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.6	80.2	83.4	77.8	81.2	82.4
Acenaphthene-d10 % recovery**	%	TM218		82.3	80.8	82.9	80.3	83.1	84
Phenanthrene-d10 % recovery**	%	TM218		81	78.4	81.5	85.4	83.8	85.4
Chrysene-d12 % recovery**	%	TM218		72	71.3	77	89.8	74.9	80.1
Perylene-d12 % recovery**	%	TM218		71.7	70	78.6	86.4	75.5	76.6
Naphthalene	<9 µg/kg	TM218		39.1 M	36 M	<9 M	201 M	182 M	12.5 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	24.4 M	<12 M	121 M	45.2 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	20.5 M	59.9 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	60.3 M	52.5 M	<10 M
Phenanthrene	<15 µg/kg	TM218		24.1 M	85.8 M	<15 M	510 M	362 M	89.2 M
Anthracene	<16 µg/kg	TM218		<16 M	26.4 M	<16 M	156 M	87.6 M	27 M
Fluoranthene	<17 µg/kg	TM218		21.2 M	158 M	<17 M	1030 M	590 M	174 M
Pyrene	<15 µg/kg	TM218		17.1 M	127 M	<15 M	831 M	520 M	129 M
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	89.9 M	<14 M	612 M	318 M	84.7 M
Chrysene	<10 µg/kg	TM218		14.3 M	103 M	<10 M	671 M	333 M	93.1 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		23.7 M	158 M	<15 M	1100 M	536 M	124 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	46.6 M	<14 M	305 M	189 M	39.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	79.7 M	<15 M	604 M	333 M	68.3 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	78.6 M	<18 M	519 M	317 M	60.3 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	116 M	50.4 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	72.8 M	<24 M	498 M	266 M	57.4 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		140	1090	<118	7360	4240	959

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2	AI31-1
			Depth (m)	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630248	23630211	23630215	23630227	23630232	23630219
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.7	81.7	80.1	84.2	78.5	82.7
Acenaphthene-d10 % recovery**	%	TM218		80.7	82.3	80	82.8	82.1	81.5
Phenanthrene-d10 % recovery**	%	TM218		80.3	82.1	78.5	80.4	85.8	79.4
Chrysene-d12 % recovery**	%	TM218		82.6	79.3	73.5	80.2	79	76.6
Perylene-d12 % recovery**	%	TM218		80.8	77	72.2	81	72.8	76.2
Naphthalene	<9 µg/kg	TM218		39.9 M	130 M	62.2 M	127 M	649 M	396 M
Acenaphthylene	<12 µg/kg	TM218		26.5 M	102 M	82.2 M	101 M	560 M	217 M
Acenaphthene	<8 µg/kg	TM218		<8 M	12.1 M	11.4 M	14.1 M	67.5 M	50.5 M
Fluorene	<10 µg/kg	TM218		<10 M	63.6 M	17.2 M	107 M	455 M	169 M
Phenanthrene	<15 µg/kg	TM218		45.3 M	771 M	194 M	703 M	4260 M	1590 M
Anthracene	<16 µg/kg	TM218		<16 M	153 M	70.2 M	133 M	965 M	486 M
Fluoranthene	<17 µg/kg	TM218		80.1 M	1250 M	520 M	992 M	6720 M	2880 M
Pyrene	<15 µg/kg	TM218		69.5 M	901 M	371 M	737 M	4720 M	2140 M
Benz(a)anthracene	<14 µg/kg	TM218		52.1 M	555 M	289 M	406 M	2830 M	1310 M
Chrysene	<10 µg/kg	TM218		55.2 M	526 M	267 M	356 M	2360 M	1190 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		91.4 M	814 M	449 M	607 M	3870 M	1910 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		29.1 M	261 M	149 M	206 M	1220 M	642 M
Benzo(a)pyrene	<15 µg/kg	TM218		56.9 M	493 M	298 M	377 M	2310 M	1220 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		69.2 M	464 M	324 M	376 M	2310 M	1120 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	89.7 M	67.3 M	67.2 M	340 M	219 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		70.2 M	407 M	275 M	313 M	1710 M	961 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		685	7000	3450	5620	35300	16500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-2	T6-1	T6-2	T6-3	T7-1	T7-2
			Depth (m)	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630223	23630206	23630267	23630280	23630271	23630275
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.5	79.4	80.6	79	77.1	79.9
Acenaphthene-d10 % recovery**	%	TM218		81	84.9	80.9	78.9	77.9	82.7
Phenanthrene-d10 % recovery**	%	TM218		80.7	88.4	82.9	81.3	80.9	80.6
Chrysene-d12 % recovery**	%	TM218		86	79.1	82	80.3	84.7	72.4
Perylene-d12 % recovery**	%	TM218		80.8	76.1	78.9	87.9	84.2	61.5
Naphthalene	<9 µg/kg	TM218		747 M	141 M	99.3 M	182 M	188 #	922 #
Acenaphthylene	<12 µg/kg	TM218		522 M	<12 M	<12 M	13.6 M	53.7 #	263 #
Acenaphthene	<8 µg/kg	TM218		104 M	98 M	70.1 M	86.5 M	<8 #	62.6 #
Fluorene	<10 µg/kg	TM218		655 M	69.5 M	38 M	63.6 M	14.1 #	257 #
Phenanthrene	<15 µg/kg	TM218		3700 M	841 M	562 M	753 M	334 #	1460 #
Anthracene	<16 µg/kg	TM218		820 M	169 M	104 M	119 M	87 #	336 #
Fluoranthene	<17 µg/kg	TM218		4860 M	1610 M	1220 M	1400 M	535 #	1740 #
Pyrene	<15 µg/kg	TM218		3510 M	1520 M	1190 M	1310 M	397 #	1240 #
Benz(a)anthracene	<14 µg/kg	TM218		2050 M	1190 M	918 M	1070 M	279 #	666 #
Chrysene	<10 µg/kg	TM218		2070 M	1220 M	1020 M	1090 M	304 #	673 #
Benzo(b)fluoranthene	<15 µg/kg	TM218		2780 M	1970 M	1520 M	1550 M	415 #	566 #
Benzo(k)fluoranthene	<14 µg/kg	TM218		841 M	700 M	579 M	652 M	127 #	236 #
Benzo(a)pyrene	<15 µg/kg	TM218		1640 M	1380 M	1090 M	1480 M	240 #	484 #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1290 M	1230 M	823 M	904 M	207 #	284 #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		268 M	207 M	155 M	154 M	44.4 #	64.8 #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1190 M	863 M	747 M	862 M	190 #	223 #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		27000	13200	10100	11700	3420	9480

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		22.5 4	86.2	86.2	100	68.5 4	113
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2860	<1000	<1000	<1000	<1000	<5000
Aliphatics >C16-C21	<1000 µg/kg	TM414		18300	<1000	1640	<1000	3880	10300
Aliphatics >C21-C35	<1000 µg/kg	TM414		46600	<1000	11000	<1000	15800	35500
Aliphatics >C35-C44	<1000 µg/kg	TM414		15200	<1000	4750	<1000	5140	13600
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		83500	<5000	17900	<5000	25600	63200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		121000	<10000	32300	<10000	50600	98800
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2490	<1000	<1000	<1000	<1000	<5000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		8030	<1000	1380	<1000	5240	<5000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		24900	<1000	11600	1030	17200	26800
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1360	<1000	1460	<1000	1950	<5000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		37100	<5000	14400	<5000	25000	35600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		121000	<10000	32300	<10000	50600	98800
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50	<50	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50	<50	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20	<20	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94.6	91	53.6 4	102	117	65.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	14.8	31.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	27.4	59.2 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1430	1340	2520	<1000	<10000
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	5630	5350	7930	4750	16500
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	32500
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	7530	7140	10600	6370	56300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	15000	38700	50600	23500	227000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	18.2	39.4 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	2910	3460	2870	41600
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	5660	24400	30400	12300	112000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	4080	5830	1710	13800
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	7510	31600	39900	17100	170000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	15000	38700	50600	23500	227000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	90.5 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	90.5 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		47.3 4	89.5	54.9 4	74.9	85.5	36.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	12.8	<10 4	<10	14.6	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	42.9	42.5 4	<10	60.5	27.4 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	62.6	40.4 4	<10	59.4	31.7 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	4060	1390	1760	1650	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		2300	6400	5430	18200	9070	2890
Aliphatics >C21-C35	<1000 µg/kg	TM414		13300	20300	35200	25800	33600	17300
Aliphatics >C35-C44	<1000 µg/kg	TM414		4060	7870	9100	6930	8670	2190
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		19700	39000	51400	53000	53000	22800
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		57500	92900	101000	169000	109000	28300
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	20.2	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	18.1 4	<10	29.1	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	41.8	26.6 4	<10	39.2	21.1 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	2300	1370	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		7640	14000	6850	16900	7680	1160
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28300	34100	36800	85700	44100	3240
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1300	2990	4140	12600	3360	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1610	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		37800	53900	49300	116000	56100	5530
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		57500	93000	101000	169000	109000	28400
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	118	82.9 4	<50	134	59.1 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	88.5	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	118	82.9 4	<20	223	59.1 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	T7-2
Depth (m)	1.20 - 1.20
Sample Type	Soil/Solid (S)
Date Sampled	27/01/2021
Sample Time	.
Date Received	29/01/2021
SDG Ref	210129-39
Lab Sample No.(s)	23630275
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	2 4
Aliphatics >C5-C6	<10 µg/kg	TM089	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414	6570
Aliphatics >C12-C16	<1000 µg/kg	TM414	14600
Aliphatics >C16-C21	<1000 µg/kg	TM414	11100
Aliphatics >C21-C35	<1000 µg/kg	TM414	23900
Aliphatics >C35-C44	<1000 µg/kg	TM414	3790
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	60000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	120000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414	1280
Aromatics > EC12-EC16	<1000 µg/kg	TM414	8350
Aromatics > EC16-EC21	<1000 µg/kg	TM414	18100
Aromatics > EC21-EC35	<1000 µg/kg	TM414	30900
Aromatics >EC35-EC44	<1000 µg/kg	TM414	1290
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	59900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	120000
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50 4
GRO >C5-C10	<20 µg/kg	TM089	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	126	115	108	111	111
Toluene-d8**	%	TM116		93.9	100	97.4	98.5	95.8	94.9
4-Bromofluorobenzene**	%	TM116		80.7	93.4	93.6	99.6	94.3	91.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	317 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
Dibromofluoromethane**	%	TM116		118	115	118	107	106	105
Toluene-d8**	%	TM116		96.5	98.7	93	94.1	95.4	91.9
4-Bromofluorobenzene**	%	TM116		96.6	94.5	81.7	89.3	94.9	83.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	392 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	113	104	105	98.6	124
Toluene-d8**	%	TM116		92.6	96.8	97.5	97.1	94.1	88
4-Bromofluorobenzene**	%	TM116		79.4	86.7	93.2	98.1	85.7	82.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 #
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 #
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 #
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Naphthalene	<13 µg/kg	TM116		370 M	498 M	<260 M	<260 M	<260 M	<260 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	T7-2
Depth (m)	1.20 - 1.20
Sample Type	Soil/Solid (S)
Date Sampled	27/01/2021
Sample Time	.
Date Received	29/01/2021
SDG Ref	210129-39
Lab Sample No.(s)	23630275
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	104
Toluene-d8**	%	TM116	93.7
4-Bromofluorobenzene**	%	TM116	86
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<2000 #
Benzene	<9 µg/kg	TM116	<1800 #
Toluene	<7 µg/kg	TM116	<1400 #
Ethylbenzene	<4 µg/kg	TM116	<800 #
p/m-Xylene	<10 µg/kg	TM116	<2000 #
o-Xylene	<10 µg/kg	TM116	<2000 #
Naphthalene	<13 µg/kg	TM116	<2600 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<4
Sum of BTEX	<40 µg/kg	TM116	<8000

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AG30-2 1.30 - 1.30 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630288 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AG31-2 1.20 - 1.20 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630306 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH29-2 1.60 - 1.60 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630262 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH30-2 1.40 - 1.40 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630248 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH31-2 1.70 - 1.70 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630215 TM048	08/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AI30-2 1.80 - 1.80 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630232 TM048	08/02/2021	James Richards	ACM debris in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AI31-2 1.50 - 1.50 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630223 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	T6-1 0.50 - 0.50 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630206 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	T6-3 2.20 - 2.20 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630280 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	T7-1 0.50 - 0.50 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630271 TM048	08/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AI30-2	None (#)	N/A	0.0018 (#)	<0.001 (#)	0.0018 (#)
Depth (m)	1.80 - 1.80					
Sample Type	SOLID					
Date Sampled	28/01/2021 00:00:00					
Date Receieved	29/01/2021 05:00:00					
SDG	210129-39					
Original Sample	23630232					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Test Completion Dates

Lab Sample No(s)	23630284	23630288	23630297	23630306	23630255	23630262	23630239	23630248	23630211	23630215
Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2	AH30-1	AH30-2	AH31-1	AH31-2
AGS Ref.										
Depth	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021		08-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	09-Feb-2021	07-Feb-2021
Metals in solid samples by OES	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021	05-Feb-2021
PAH by GCMS		04-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	04-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021
pH	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	05-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	08-Feb-2021	10-Feb-2021	10-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021
Total Organic Carbon	08-Feb-2021	08-Feb-2021	03-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	09-Feb-2021	07-Feb-2021
VOC MS (S)	07-Feb-2021	08-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021

Lab Sample No(s)	23630227	23630232	23630219	23630223	23630206	23630267	23630280	23630271	23630275
Customer Sample Ref.	AI30-1	AI30-2	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1	T7-2
AGS Ref.									
Depth	0.30 - 0.30	1.80 - 1.80	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50	1.20 - 1.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		08-Feb-2021		05-Feb-2021	05-Feb-2021		05-Feb-2021	08-Feb-2021	
Asbestos Quantification - Full		16-Feb-2021							
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	04-Feb-2021	02-Feb-2021	04-Feb-2021
EPH CWG GC (S)	05-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021	05-Feb-2021
PAH by GCMS	03-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
pH	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	05-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	08-Feb-2021	08-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	29-Jan-2021	30-Jan-2021	29-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021
Total Organic Carbon	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
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2430/2440
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Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	10 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210130-32
Your Reference:	P18-669
Location:	Llanwern
Report No:	586352

We received 24 samples on Saturday January 30, 2021 and 24 of these samples were scheduled for analysis which was completed on Wednesday February 10, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23638988	AJ27-1		0.70 - 0.70	29/01/2021
23638943	AJ29-1		0.70 - 0.70	28/01/2021
23638959	AJ29-2		1.50 - 1.50	28/01/2021
23638993	AJ30-1		0.40 - 0.40	28/01/2021
23638999	AJ30-2		1.50 - 1.50	28/01/2021
23638980	AK27-1		0.80 - 0.80	29/01/2021
23638976	AK28-1		1.00 - 1.00	29/01/2021
23639025	AK30-1		0.20 - 0.20	28/01/2021
23639030	AK30-2		1.00 - 1.00	28/01/2021
23639015	AK31-1		0.10 - 0.10	28/01/2021
23639020	AK31-2		1.10 - 1.10	28/01/2021
23639060	AK32-1		1.00 - 1.00	28/01/2021
23639067	AK33-1		0.20 - 0.20	29/01/2021
23639071	AK34-1		0.80 - 0.80	29/01/2021
23639077	AK34-2		1.60 - 1.60	29/01/2021
23638964	AL28-1		0.50 - 0.50	29/01/2021
23638970	AL28-2		1.20 - 1.20	29/01/2021
23638954	AL29-1		0.80 - 0.80	29/01/2021
23639034	AL30-1		0.50 - 0.50	28/01/2021
23639007	AL30-2		2.00 - 2.00	28/01/2021
23639041	AL31-1		0.50 - 0.50	28/01/2021
23639045	AL31-2		1.50 - 1.50	28/01/2021
23639051	AL32-1		0.50 - 0.50	28/01/2021
23638948	AL33-1		0.80 - 0.80	29/01/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23638988		23638943		23638959		23638993		23638999		23638980		23638976		23639025				
Customer Sample Reference			AJ27-1		AJ29-1		AJ29-2		AJ30-1		AJ30-2		AK27-1		AK28-1		AK30-1				
AGS Reference																					
Depth (m)			0.70 - 0.70		0.70 - 0.70		1.50 - 1.50		0.40 - 0.40		1.50 - 1.50		0.80 - 0.80		1.00 - 1.00		0.20 - 0.20				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X					X					X					X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24		X			X		X			X		X			X		X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
PAH by GCMS	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
pH	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
Sample description	All	NDPs: 0 Tests: 23	X			X					X		X			X		X			X
Total Organic Carbon	All	NDPs: 0 Tests: 23	X			X		X			X		X			X		X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X		X			X		X			X
VOC MS (S)	All	NDPs: 0 Tests: 24		X			X		X			X		X			X		X		

23638970	AL28-2		1.20 - 1.20	1kg TUB with Handle (ALE260)	S			x											
23638964	AL28-1		0.50 - 0.50	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639077	AK34-2		1.60 - 1.60	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639071	AK34-1		0.80 - 0.80	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639067	AK33-1		0.20 - 0.20	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639060	AK32-1		1.00 - 1.00	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639020	AK31-2		1.10 - 1.10	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x		x	
23639015	AK31-1		0.10 - 0.10	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639030	AK30-2		1.00 - 1.00	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639025	AK30-1		0.20 - 0.20	60g VOC (ALE215)	S						x								x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23638970		23638954		23639034		23639007		23639041		23639045		23639051		23638948				
Customer Sample Reference			AL28-2		AL29-1		AL30-1		AL30-2		AL31-1		AL31-2		AL32-1		AL33-1				
AGS Reference																					
Depth (m)			1.20 - 1.20		0.80 - 0.80		0.50 - 0.50		2.00 - 2.00		0.50 - 0.50		1.50 - 1.50		0.50 - 0.50		0.80 - 0.80				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X			X					X					X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24		X			X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 24		X			X			X		X			X		X			X	

23638948	AL33-1		0.80 - 0.80	60g VOC (ALE215)	S
					X
					X

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23638988	AJ27-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23638943	AJ29-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23638959	AJ29-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23638993	AJ30-1	0.40 - 0.40	Black	Sand	Stones	None
23638999	AJ30-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23638980	AK27-1	0.80 - 0.80	Dark Brown	Sand	Stones	None
23638976	AK28-1	1.00 - 1.00	Grey	Sand	Stones	Concrete/Aggregate
23639025	AK30-1	0.20 - 0.20	Dark Brown	Sand	Stones	None
23639030	AK30-2	1.00 - 1.00	Grey	Sand	Stones	Concrete/Aggregate
23639015	AK31-1	0.10 - 0.10	Dark Brown	Sandy Loam	Stones	Concrete/Aggregate
23639020	AK31-2	1.10 - 1.10	Black	Sand	None	None
23639060	AK32-1	1.00 - 1.00	Black	Sand	Stones	None
23639067	AK33-1	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23639071	AK34-1	0.80 - 0.80	Dark Brown	Sand	None	Stones
23639077	AK34-2	1.60 - 1.60	Dark Brown	Sand	Vegetation	Stones
23638964	AL28-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23638970	AL28-2	1.20 - 1.20	Dark Brown	Sand	Stones	None
23638954	AL29-1	0.80 - 0.80	Dark Brown	Sand	Brick	Stones
23639034	AL30-1	0.50 - 0.50	Grey	Sand	Stones	None
23639007	AL30-2	2.00 - 2.00	Grey	Sand	Stones	Concrete/Aggregate
23639041	AL31-1	0.50 - 0.50	Grey	Sand	Stones	None
23639045	AL31-2	1.50 - 1.50	Dark Brown	Sand	Stones	N/A
23639051	AL32-1	0.50 - 0.50	Black	Sand	Stones	Concrete/Aggregate
23638948	AL33-1	0.80 - 0.80	Dark Brown	Stone/Soil	None	Stones

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	1.4	10	13	20	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	18.6 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.31 #	3.95 #	4.22 #	>100 #	22.9 #	1.81 #
pH	1 pH Units	TM133		11.9 M	9.91 M	9.58 M	8.83 M	9.57 M	12.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	14.2 M	9.37 M	7.95 M	11.5 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.92 M	2.29 M	1.51 M	0.923 M	0.632 M	0.469 M
Chromium	<0.9 mg/kg	TM181		374 M	<9 M	<9 M	17.8 M	30.6 M	205 M
Copper	<1.4 mg/kg	TM181		27.7 M	23.5 M	14.5 M	34.6 M	31.3 M	<14 M
Iron	<1000 mg/kg	TM181		133000 #	338000 #		49600 #		49900 #
Lead	<0.7 mg/kg	TM181		53.6 M	39.7 M	24.7 M	52.8 M	47.6 M	39.6 M
Manganese	<0.13 mg/kg	TM181		29500 M	4850 M	2970 M	1360 M	1360 M	14900 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		15.3 M	36.9 M	21.7 M	17.5 M	33.3 M	4.61 M
Selenium	<1 mg/kg	TM181		14 #	<10 #	<10 #	<10 #	<10 #	13.4 #
Vanadium	<0.2 mg/kg	TM181		968 #	49.6 #	36.4 #	34.8 #	43 #	244 #
Zinc	<1.9 mg/kg	TM181		84.5 M	131 M	80.8 M	70.3 M	86.9 M	42.9 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.5	12	13	11	23	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		2.6 #	12.1 #	38.4 #	17.2 #		31.5 #
pH	1 pH Units	TM133		12 M	9.22 M	11.3 M	10.5 M	10.8 M	11.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	7.22 M	11.2 M	10.3 M	6.83 M	6.44 M
Cadmium	<0.02 mg/kg	TM181		1.27 M	0.769 M	1.47 M	2.19 M	0.45 M	0.963 M
Chromium	<0.9 mg/kg	TM181		723 M	21.9 M	222 M	142 M	15.3 M	265 M
Copper	<1.4 mg/kg	TM181		37.9 M	<14 M	40.9 M	36.5 M	21.7 M	16.4 M
Iron	<1000 mg/kg	TM181		152000 #	58900 #	54800 #	230000 #		
Lead	<0.7 mg/kg	TM181		137 M	44.3 M	60.4 M	46.7 M	57.2 M	34.2 M
Manganese	<0.13 mg/kg	TM181		34000 M	1710 M	8170 M	5740 M	1150 M	3190 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		13.1 M	24.3 M	26.3 M	37.2 M	11.3 M	14.4 M
Selenium	<1 mg/kg	TM181		23.3 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		543 #	32.7 #	285 #	97.3 #	26 #	233 #
Zinc	<1.9 mg/kg	TM181		94.1 M	77.6 M	265 M	109 M	75.3 M	68.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	11	13	6.9	6.9	9.3
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		9.43 #	10.1 #	4.14 #	<0.35 #	3.31 #	6.14 #
pH	1 pH Units	TM133		10.2 M	9.51 M	10.2 M	12.5 M	12.4 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	1.02 M
Arsenic	<0.6 mg/kg	TM181		9.69 M	13.6 M	15.9 M	<6 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.6 M	1.49 M	1.34 M	1.09 M	1.19 M	1.42 M
Chromium	<0.9 mg/kg	TM181		75 M	119 M	33.8 M	1080 M	936 M	836 M
Copper	<1.4 mg/kg	TM181		22.4 M	23.3 M	20.2 M	14.3 M	<14 M	23.3 M
Iron	<1000 mg/kg	TM181		134000 #		101000 #		163000 #	166000 #
Lead	<0.7 mg/kg	TM181		72 M	67.5 M	44.3 M	22.4 M	23.5 M	100 M
Manganese	<0.13 mg/kg	TM181		8420 M	8330 M	6690 M	48700 M	48700 M	43500 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		45.9 M	26.5 M	27.2 M	5.25 M	5.37 M	9.39 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	30.6 #	31.2 #	29.5 #
Vanadium	<0.2 mg/kg	TM181		139 #	134 #	53.6 #	840 #	709 #	684 #
Zinc	<1.9 mg/kg	TM181		212 M	196 M	120 M	40.6 M	57.3 M	123 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	9.3	21	12	9.4	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 #
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #
Soil Organic Matter (SOM)	<0.35 %	TM132		20.5 #	21.2 #	54.5 #	3.33 #	18.1 #	1.62 #
pH	1 pH Units	TM133		10.6 M	11.9 M	10.6 M	9.1 M	11.3 M	11.9 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Arsenic	<0.6 mg/kg	TM181		8.72 M	<6 M	<6 M	11.4 M	8.28 M	7.73 #
Cadmium	<0.02 mg/kg	TM181		1.22 M	1.45 M	1.11 M	0.662 M	1.87 M	1.01 #
Chromium	<0.9 mg/kg	TM181		235 M	653 M	68.5 M	25.3 M	160 M	1170 #
Copper	<1.4 mg/kg	TM181		19.2 M	15.3 M	<14 M	24 M	20.4 M	53.3 #
Iron	<1000 mg/kg	TM181		90000 #	144000 #	95800 #	32100 #	138000 #	
Lead	<0.7 mg/kg	TM181		90 M	<7 M	23.3 M	19.8 M	37.6 M	26.8 #
Manganese	<0.13 mg/kg	TM181		11800 M	35700 M	11400 M	1690 M	12900 M	16300 #
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Nickel	<0.2 mg/kg	TM181		23.6 M	5.78 M	22.8 M	26.6 M	34.6 M	496 #
Selenium	<1 mg/kg	TM181		10.2 #	19.7 #	<10 #	<10 #	<10 #	10.4 #
Vanadium	<0.2 mg/kg	TM181		218 #	544 #	94.3 #	40.1 #	157 #	255 #
Zinc	<1.9 mg/kg	TM181		198 M	39.5 M	81.3 M	64.9 M	98.7 M	70.7 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.4	86.3	83	77.8	82.9	80.2
Acenaphthene-d10 % recovery**	%	TM218		82.2	82.5	83.4	78	80.7	81.8
Phenanthrene-d10 % recovery**	%	TM218		80.2	80.8	80.1	74.5	80.9	80.5
Chrysene-d12 % recovery**	%	TM218		78.5	77.8	72.1	66.8	76.7	78
Perylene-d12 % recovery**	%	TM218		75.5	74.9	70.2	70.4	73.4	74.6
Naphthalene	<9 µg/kg	TM218		21 M	<9 M	<9 M	112 M	117 M	140 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	173 M	191 M	62.7 M
Acenaphthene	<8 µg/kg	TM218		42.9 M	<8 M	<8 M	<8 M	<8 M	22.8 M
Fluorene	<10 µg/kg	TM218		19.1 M	<10 M	<10 M	34.4 M	58.1 M	33.1 M
Phenanthrene	<15 µg/kg	TM218		458 M	43.8 M	22.3 M	233 M	350 M	306 M
Anthracene	<16 µg/kg	TM218		112 M	<16 M	<16 M	71.2 M	99.1 M	78.5 M
Fluoranthene	<17 µg/kg	TM218		1250 M	64.2 M	31.2 M	956 M	874 M	597 M
Pyrene	<15 µg/kg	TM218		1190 M	46.4 M	27.1 M	892 M	727 M	462 M
Benz(a)anthracene	<14 µg/kg	TM218		715 M	29.7 M	30.7 M	732 M	484 M	330 M
Chrysene	<10 µg/kg	TM218		828 M	30.4 M	37.1 M	560 M	514 M	391 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1190 M	40.9 M	64.1 M	1450 M	937 M	587 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		376 M	<14 M	19.2 M	430 M	280 M	181 M
Benzo(a)pyrene	<15 µg/kg	TM218		775 M	24.1 M	35.1 M	1060 M	570 M	332 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		618 M	23.6 M	38 M	972 M	566 M	318 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		103 M	<23 M	<23 M	164 M	108 M	68.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		652 M	<24 M	35.9 M	860 M	524 M	298 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		8350	303	341	8700	6400	4210

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.7	81.9	77.2	80.3	77.7	78.8
Acenaphthene-d10 % recovery**	%	TM218		82.4	81	79.1	83.5	78.7	82.5
Phenanthrene-d10 % recovery**	%	TM218		85.2	79.1	80.2	86.6	74.3	86.8
Chrysene-d12 % recovery**	%	TM218		88	75.2	81.2	75.5	63.8	75.9
Perylene-d12 % recovery**	%	TM218		102	72.2	75.3	72.2	62.3	70.5
Naphthalene	<9 µg/kg	TM218		19.5 M	31.9 M	27 M	568 M	134 M	547 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	101 M	26.6 M	665 M	58.5 M	932 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<80 M	14.4 M	64 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	18.7 M	1050 M	89.5 M	562 M
Phenanthrene	<15 µg/kg	TM218		101 M	128 M	151 M	6250 M	835 M	3770 M
Anthracene	<16 µg/kg	TM218		17.8 M	49.4 M	30.8 M	2260 M	268 M	1440 M
Fluoranthene	<17 µg/kg	TM218		339 M	511 M	225 M	7650 M	886 M	11200 M
Pyrene	<15 µg/kg	TM218		316 M	416 M	170 M	5150 M	659 M	9490 M
Benz(a)anthracene	<14 µg/kg	TM218		177 M	317 M	115 M	2720 M	564 M	4800 M
Chrysene	<10 µg/kg	TM218		195 M	316 M	115 M	2220 M	567 M	4920 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		295 M	675 M	184 M	3190 M	771 M	7250 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		114 M	232 M	54.8 M	980 M	238 M	1710 M
Benzo(a)pyrene	<15 µg/kg	TM218		190 M	429 M	106 M	2000 M	537 M	4080 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		204 M	471 M	89.4 M	1850 M	377 M	4210 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		32.5 M	85.4 M	<23 M	324 M	99.1 M	686 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		162 M	407 M	85.1 M	1320 M	361 M	3360 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2160	4170	1400	38200	6460	59000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.8	79.8	78.1	81	85.2	79.6
Acenaphthene-d10 % recovery**	%	TM218		81.2	83.1	82.3	81.9	80.9	85.4
Phenanthrene-d10 % recovery**	%	TM218		76.9	87	86.5	84.4	78	89.9
Chrysene-d12 % recovery**	%	TM218		76.8	75.7	79.4	79.7	76.7	78.6
Perylene-d12 % recovery**	%	TM218		77.9	70	75.9	83.9	73.5	72.1
Naphthalene	<9 µg/kg	TM218		42.1 M	59.9 M	23 M	<9 M	24.4 M	141 M
Acenaphthylene	<12 µg/kg	TM218		31.5 M	46.1 M	<12 M	<12 M	<12 M	47.2 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M	<8 M	24.7 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M	11.2 M	45.4 M
Phenanthrene	<15 µg/kg	TM218		92.3 M	120 M	42.8 M	17.3 M	107 M	409 M
Anthracene	<16 µg/kg	TM218		27.6 M	33.6 M	<16 M	<16 M	38.9 M	96.7 M
Fluoranthene	<17 µg/kg	TM218		193 M	301 M	89.1 M	48.4 M	184 M	776 M
Pyrene	<15 µg/kg	TM218		143 M	259 M	73.7 M	52.2 M	141 M	580 M
Benz(a)anthracene	<14 µg/kg	TM218		104 M	184 M	55 M	22.7 M	86 M	307 M
Chrysene	<10 µg/kg	TM218		101 M	157 M	60.6 M	32.9 M	97.2 M	309 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		186 M	388 M	104 M	50.2 M	130 M	473 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		61.5 M	104 M	29.5 M	18.5 M	47.9 M	140 M
Benzo(a)pyrene	<15 µg/kg	TM218		111 M	195 M	56.7 M	<15 M	77 M	259 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		128 M	221 M	62.2 M	23.1 M	71.1 M	268 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	34.4 M	<23 M	<23 M	<23 M	47.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		113 M	169 M	50.2 M	<24 M	67.2 M	208 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1330	2270	647	265	1080	4130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.9	81.1	78.5	81	82.1	83.7
Acenaphthene-d10 % recovery**	%	TM218		83.3	82.4	79.8	78	82.6	83.1
Phenanthrene-d10 % recovery**	%	TM218		83.7	79.6	77.5	78.6	83.1	81
Chrysene-d12 % recovery**	%	TM218		78	73.6	69	72.3	80.5	78.6
Perylene-d12 % recovery**	%	TM218		70.3	70	69.1	70.5	86.3	77
Naphthalene	<9 µg/kg	TM218		190 M	52.4 M	143 M	11.5 M	44.7 M	70.5 #
Acenaphthylene	<12 µg/kg	TM218		164 M	59.9 M	63.9 M	<12 M	38.3 M	30.5 #
Acenaphthene	<8 µg/kg	TM218		37 M	<8 M	11.9 M	<8 M	<8 M	<8 #
Fluorene	<10 µg/kg	TM218		136 M	28.1 M	37 M	<10 M	11.6 M	12.4 #
Phenanthrene	<15 µg/kg	TM218		943 M	406 M	390 M	28.8 M	137 M	113 #
Anthracene	<16 µg/kg	TM218		303 M	126 M	101 M	<16 M	43.6 M	30.8 #
Fluoranthene	<17 µg/kg	TM218		1820 M	666 M	704 M	38.5 M	354 M	208 #
Pyrene	<15 µg/kg	TM218		1330 M	496 M	526 M	30.4 M	276 M	163 #
Benz(a)anthracene	<14 µg/kg	TM218		857 M	255 M	409 M	23.2 M	243 M	126 #
Chrysene	<10 µg/kg	TM218		838 M	271 M	391 M	29.2 M	210 M	143 #
Benzo(b)fluoranthene	<15 µg/kg	TM218		1200 M	340 M	525 M	38.3 M	426 M	247 #
Benzo(k)fluoranthene	<14 µg/kg	TM218		380 M	101 M	181 M	<14 M	130 M	74.6 #
Benzo(a)pyrene	<15 µg/kg	TM218		692 M	201 M	382 M	20 M	271 M	149 #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		589 M	175 M	286 M	<18 M	269 M	175 #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		132 M	41.1 M	64.2 M	<23 M	47.6 M	31.1 #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		546 M	175 M	261 M	<24 M	231 M	142 #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		10200	3390	4480	220	2730	1720

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		130	96.3	122	77.2	122	102
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	15	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	18.4	20	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	20	42.6	22.5	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	10400	<1000	7390
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1100	<1000	20900	6190	26300
Aliphatics >C21-C35	<1000 µg/kg	TM414		7440	5090	1410	27100	18600	66600
Aliphatics >C35-C44	<1000 µg/kg	TM414		3070	<1000	<1000	4980	5250	11200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11500	6740	<5000	63900	31000	112000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		45000	<10000	<10000	101000	50800	123000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	13.3	28.8	15	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1020	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4410	<1000	<1000	4730	1870	1520
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28000	<1000	<1000	28800	16400	8940
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	2340	1030	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		33500	<5000	<5000	36900	19800	11700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		45000	<10000	<10000	101000	50900	123000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	61	57.5	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	61	57.5	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		109	84.7	89.2	55 4	48 4	81.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10 4	18.1 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	10.4	<10 4	28.4 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2780	<1000	2160	<5000	4910	1960
Aliphatics >C16-C21	<1000 µg/kg	TM414		14800	<1000	4490	10400	15300	18800
Aliphatics >C21-C35	<1000 µg/kg	TM414		54900	2720	1940	16700	22700	12100
Aliphatics >C35-C44	<1000 µg/kg	TM414		13600	1090	<1000	<5000	1930	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		86200	<5000	8980	32000	45200	33900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		94200	23800	40800	67600	67000	190000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10 4	19.4 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	1030	2320
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	1420	1990	6630	6510	32200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		6370	12300	18500	23400	13200	110000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	5140	10900	<5000	<1000	11100
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1320	1820	<5000	<1000	1350
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		7990	18900	31800	35500	21800	156000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		94200	18900	40800	67600	67000	190000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	<20 4	<20

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		123	132 4	95.1	121	101	102
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1100	<1000	<1000	1390	12600
Aliphatics >C21-C35	<1000 µg/kg	TM414		8240	8100	6570	12300	11800	44500
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1680	1510	12200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		9500	9880	8000	14900	15000	70200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		21800	21600	16100	16800	18100	84600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1350	<1000	<1000	<1000	<1000	1570
Aromatics > EC21-EC35	<1000 µg/kg	TM414		9840	10300	7010	<1000	1960	11400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1070	<1000	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		12300	11800	8070	<5000	<5000	14400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		21800	21600	16100	14900	15000	84600
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 4	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		76.6	101	47 4	122	97.8	98.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	11.4	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	14.8	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		3810	3080	2500	1150	4380	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		19700	10500	22600	5000	18700	4260
Aliphatics >C35-C44	<1000 µg/kg	TM414		8160	1460	30700	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		32100	15300	56400	6500	24300	5540
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		70500	20100	112000	<10000	69500	10900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6390	<1000	4870	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		29000	3360	45400	1450	43500	3800
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2250	<1000	4000	<1000	1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		38400	<5000	55200	<5000	45200	5320
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		70500	15300	112000	<10000	69500	10900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
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aq	Aqueous / settled sample.
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**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
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1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Dibromofluoromethane**	%	TM116		114	116	115	120	155	114
Toluene-d8**	%	TM116		102	100	100	97.4	99.4	101
4-Bromofluorobenzene**	%	TM116		101	98	97.5	81.3	96.2	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	626 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
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(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	115	121	112	110	113
Toluene-d8**	%	TM116		101	97.9	99.3	96.1	96.5	102
4-Bromofluorobenzene**	%	TM116		98.9	91.7	96.7	85	81	95.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	462 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Dibromofluoromethane**	%	TM116		119	115	116	114	111	117
Toluene-d8**	%	TM116		101	102	102	102	99.4	101
4-Bromofluorobenzene**	%	TM116		95.3	98.9	101	100	95.8	99.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Dibromofluoromethane**	%	TM116		118	112	166	130	119	114
Toluene-d8**	%	TM116		101	99.5	98.4	98.7	99.1	102
4-Bromofluorobenzene**	%	TM116		98	96.8	93.5	99.2	93	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 #
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 #
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 #
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ29-1 0.70 - 0.70 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638943 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ30-1 0.40 - 0.40 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638993 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK27-1 0.80 - 0.80 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638980 TM048	05/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK30-1 0.20 - 0.20 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639025 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK31-1 0.10 - 0.10 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639015 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK33-1 0.20 - 0.20 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639067 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK34-2 1.60 - 1.60 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639077 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL28-2 1.20 - 1.20 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638970 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL29-1 0.80 - 0.80 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638954 TM048	08/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL30-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639034 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL31-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639041 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL32-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639051 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23638988	23638943	23638959	23638993	23638999	23638980	23638976	23639025	23639030	23639015
Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1	AK28-1	AK30-1	AK30-2	AK31-1
AGS Ref.										
Depth	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	08-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	08-Feb-2021	04-Feb-2021
PAH by GCMS	03-Feb-2021	08-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021
pH	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	09-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021	10-Feb-2021	05-Feb-2021	09-Feb-2021	05-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon	03-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021

Lab Sample No(s)	23639020	23639060	23639067	23639071	23639077	23638964	23638970	23638954	23639034	23639007
Customer Sample Ref.	AK31-2	AK32-1	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1	AL30-1	AL30-2
AGS Ref.										
Depth	1.10 - 1.10	1.00 - 1.00	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80	0.50 - 0.50	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples			05-Feb-2021		05-Feb-2021		05-Feb-2021	08-Feb-2021	05-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
EPH CWG GC (S)	04-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
Metals in solid samples by OES	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	08-Feb-2021
PAH by GCMS	05-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	08-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
pH	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon		08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
VOC MS (S)	08-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021

Lab Sample No(s)	23639041	23639045	23639051	23638948
Customer Sample Ref.	AL31-1	AL31-2	AL32-1	AL33-1
AGS Ref.				
Depth	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	03-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples	05-Feb-2021		05-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	03-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	04-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021
PAH by GCMS	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021
pH	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Deeside
CH5 3US
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	12 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210202-91
Your Reference:	P18-669
Location:	Llanwern
Report No:	586569

We received 23 samples on Tuesday February 02, 2021 and 23 of these samples were scheduled for analysis which was completed on Friday February 12, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23652632	AJ21-1		0.30 - 0.30	29/01/2021
23652638	AJ21-2		1.30 - 1.30	29/01/2021
23652642	AK21-1		0.50 - 0.50	29/01/2021
23652650	AK21-2		1.20 - 1.20	29/01/2021
23652548	AK22-1		0.50 - 0.50	29/01/2021
23652599	AK22-2		1.60 - 1.60	29/01/2021
23652657	AL21-1		0.50 - 0.50	29/01/2021
23652664	AL21-2		1.40 - 1.40	29/01/2021
23652671	P20-1		0.50 - 0.50	01/02/2021
23652552	P20-2		1.30 - 1.30	01/02/2021
23652557	P21-1		0.30 - 0.30	01/02/2021
23652561	P21-2		1.50 - 1.50	01/02/2021
23652565	Q20-1		0.60 - 0.60	01/02/2021
23652571	Q20-2		1.80 - 1.80	01/02/2021
23652577	Q21-1		0.30 - 0.30	01/02/2021
23652581	Q21-2		1.90 - 1.90	01/02/2021
23652618	Q22-1		0.30 - 0.30	01/02/2021
23652623	Q22-2		1.70 - 1.70	01/02/2021
23652585	R21-1		0.30 - 0.30	01/02/2021
23652589	R21-2		1.00 - 1.00	01/02/2021
23652594	R21-3		2.20 - 2.20	01/02/2021
23652609	R22-1		0.20 - 0.20	01/02/2021
23652613	R22-2		1.60 - 1.60	01/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23652632		23652638		23652642		23652650		23652548		23652599		23652657		23652664				
Customer Sample Reference			AJ21-1		AJ21-2		AK21-1		AK21-2		AK22-1		AK22-2		AL21-1		AL21-2				
AGS Reference																					
Depth (m)			0.30 - 0.30		1.30 - 1.30		0.50 - 0.50		1.20 - 1.20		0.50 - 0.50		1.60 - 1.60		0.50 - 0.50		1.40 - 1.40				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	X					X					X					X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X	

23652581	Q21-2		1.90 - 1.90	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652577	Q21-1		0.30 - 0.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652571	Q20-2		1.80 - 1.80	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652565	Q20-1		0.60 - 0.60	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652561	P21-2		1.50 - 1.50	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652557	P21-1		0.30 - 0.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652552	P20-2		1.30 - 1.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652671	P20-1		0.50 - 0.50	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652664	AL21-2		1.40 - 1.40	60g VOC (ALE215)	S						X											X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23652618		23652623			23652585			23652589		23652594			23652609		23652613		
Customer Sample Reference			Q22-1		Q22-2			R21-1			R21-2		R21-3			R22-1		R22-2		
AGS Reference																				
Depth (m)			0.30 - 0.30		1.70 - 1.70			0.30 - 0.30			1.00 - 1.00		2.20 - 2.20			0.20 - 0.20		1.60 - 1.60		
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X			X					X					X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23		X			X			X		X			X		X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
PAH by GCMS	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
pH	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Sample description	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
VOC MS (S)	All	NDPs: 0 Tests: 23		X			X			X		X			X		X			X

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23652632	AJ21-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652638	AJ21-2	1.30 - 1.30	Light Brown	Sand	Stones	None
23652642	AK21-1	0.50 - 0.50	Dark Brown	Sandy Clay	Stones	None
23652650	AK21-2	1.20 - 1.20	Dark Brown	Loamy Sand	Stones	None
23652548	AK22-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652599	AK22-2	1.60 - 1.60	Dark Brown	Silty Sand	Stones	None
23652657	AL21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652664	AL21-2	1.40 - 1.40	Dark Brown	Sand	Stones	None
23652671	P20-1	0.50 - 0.50	Dark Brown	Sandy Silt Loam	Stones	None
23652552	P20-2	1.30 - 1.30	Dark Brown	Sandy Clay Loam	Stones	None
23652557	P21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652561	P21-2	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23652565	Q20-1	0.60 - 0.60	Dark Brown	Sandy Silt Loam	Stones	None
23652571	Q20-2	1.80 - 1.80	Dark Brown	Stone/Soil	Stones	None
23652577	Q21-1	0.30 - 0.30	Dark Brown	Sandy Silt Loam	Stones	None
23652581	Q21-2	1.90 - 1.90	Light Brown	Silty Sand	Stones	Vegetation
23652618	Q22-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652623	Q22-2	1.70 - 1.70	Dark Brown	Loamy Sand	Stones	None
23652585	R21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652589	R21-2	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	None
23652594	R21-3	2.20 - 2.20	Dark Brown	Silty Sand	Stones	None
23652609	R22-1	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	None
23652613	R22-2	1.60 - 1.60	Dark Brown	Sandy Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		6.7	9.4	14	13	12	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.07 #	2.09 #	2.09 #	11.1 #	37.4 #	11.3 #
pH	1 pH Units	TM133		10.2 M	9.22 M	8.84 M	10.3 M	11.3 M	11.6 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	4.21 M	5.06 M	1.73 M
Arsenic	<0.6 mg/kg	TM181		<6 M	61.5 M	11.8 M	<6 M	12.2 M	7.92 M
Cadmium	<0.02 mg/kg	TM181		0.394 M	1.72 M	0.353 M	0.439 M	1.04 M	0.52 M
Chromium	<0.9 mg/kg	TM181		132 M	11.6 M	14.4 M	31 M	<9 M	37.2 M
Copper	<1.4 mg/kg	TM181		15.9 M	11 M	16.7 M	<14 M	20.7 M	19.6 M
Iron	<1000 mg/kg	TM181		98000 #	15600 #	30300 #	43300 #	220000 #	76400 #
Lead	<0.7 mg/kg	TM181		43.1 M	80.1 M	32.4 M	76.3 M	382 M	127 M
Manganese	<0.13 mg/kg	TM181		8510 M	2030 M	1050 M	5120 M	4060 M	2940 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 M	<0.1 M	<1 M	5.69 M	<1 M
Nickel	<0.2 mg/kg	TM181		23 M	8.83 M	24.3 M	10.8 M	36.9 M	24.8 M
Selenium	<1 mg/kg	TM181		<10 #	1.71 #	<1 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		70.4 #	34 #	26.4 #	38.5 #	280 #	62.9 #
Zinc	<1.9 mg/kg	TM181		131 M	573 M	117 M	237 M	641 M	236 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	11	9.8	23	13	9.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	51.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0258 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0129 M	0.0114 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		12 #	5.26 #	10.9 #	8.46 #	13.8 #	2.1 #
pH	1 pH Units	TM133		8.81 M	9.39 M	11.8 M	11.3 M	11.3 M	11.2 M
Cyanide, Total	<1 mg/kg	TM153		3.41 M	2.09 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.2 M	<6 M	6.61 M	16 M	9.58 M	7.79 M
Cadmium	<0.02 mg/kg	TM181		1.89 M	<0.2 M	0.716 M	0.537 M	0.864 M	0.356 M
Chromium	<0.9 mg/kg	TM181		238 M	12 M	131 M	56.8 M	67.7 M	456 M
Copper	<1.4 mg/kg	TM181		26.3 M	17.8 M	<14 M	21.9 M	17 M	27.5 M
Iron	<1000 mg/kg	TM181		109000 #	18500 #	194000 #	116000 #	176000 #	176000 #
Lead	<0.7 mg/kg	TM181		167 M	27 M	47.9 M	44.2 M	63.2 M	34.9 M
Manganese	<0.13 mg/kg	TM181		16900 M	1060 M	7940 M	4390 M	6860 M	19500 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.7 M	19.6 M	22.4 M	34.2 M	27.8 M	15.1 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		208 #	25.6 #	154 #	106 #	121 #	408 #
Zinc	<1.9 mg/kg	TM181		546 M	75.6 M	168 M	131 M	191 M	107 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.9	17	9.1	15	13	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	43.9 #	<12 M	27.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0549 M	<0.01 #	0.011 M	<0.01 M	0.023 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	0.023 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0549 M	<0.035 #	<0.035 M	<0.035 M	0.046 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.1 #	12.2 #	19.7 #	3.05 #	4.69 #	1.07 #
pH	1 pH Units	TM133		11.2 M	9.61 #	10.3 M	8.62 M	12.1 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M	1.96 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.13 M	9.02 #	7.96 M	6.39 M	18.6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.03 M	0.139 #	0.882 M	0.306 M	2.86 M	0.427 M
Chromium	<0.9 mg/kg	TM181		81.9 M	5.19 #	62 M	20.1 M	411 M	125 M
Copper	<1.4 mg/kg	TM181		21.3 M	23 #	19.4 M	<14 M	41.7 M	<14 M
Iron	<1000 mg/kg	TM181		75700 #	20500 #	148000 #	37600 #	190000 #	80400 #
Lead	<0.7 mg/kg	TM181		109 M	20.2 #	80.6 M	22.1 M	369 M	21.4 M
Manganese	<0.13 mg/kg	TM181		7190 M	402 #	7410 M	2970 M	24500 M	8590 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 #	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.9 M	26.9 #	23.8 M	20.9 M	31.1 M	7.4 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<10 #	<10 #	10.5 #	<10 #
Vanadium	<0.2 mg/kg	TM181		98.3 #	18.6 #	125 #	43.6 #	414 #	244 #
Zinc	<1.9 mg/kg	TM181		467 M	50.1 #	222 M	81.3 M	1260 M	59.7 M

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		8.8	12	11	11	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0114 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0112 M	0.0112 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		6.15 #	8.79 #	6.5 #	3.34 #	7.43 #
pH	1 pH Units	TM133		11.7 M	11.4 M	11 M	12.1 M	11.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		17.8 M	9.45 M	6.58 M	9.05 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.04 M	0.673 M	2.4 M	0.735 M	1.95 M
Chromium	<0.9 mg/kg	TM181		155 M	115 M	451 M	237 M	184 M
Copper	<1.4 mg/kg	TM181		21.3 M	19.8 M	16.4 M	47.9 M	<14 M
Iron	<1000 mg/kg	TM181		183000 #	101000 #	174000 #	117000 #	160000 #
Lead	<0.7 mg/kg	TM181		35.6 M	68.4 M	57.8 M	102 M	11.1 M
Manganese	<0.13 mg/kg	TM181		13900 M	9310 M	26200 M	12300 M	10000 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		20.5 M	21 M	14.7 M	25.3 M	12.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		184 #	162 #	337 #	220 #	209 #
Zinc	<1.9 mg/kg	TM181		153 M	220 M	231 M	373 M	76.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.6	78.3	79.7	75	81.1	80.8
Acenaphthene-d10 % recovery**	%	TM218		80.4	81.9	80.5	79	82.9	80.8
Phenanthrene-d10 % recovery**	%	TM218		85	86.4	84.3	77.5	86.2	85.7
Chrysene-d12 % recovery**	%	TM218		86	95.4	91.7	74	85.8	87.7
Perylene-d12 % recovery**	%	TM218		79.2	89.5	90.9	73.5	74.4	79.4
Naphthalene	<9 µg/kg	TM218		217 M	11 M	<9 M	<450 M	232 M	329 M
Acenaphthylene	<12 µg/kg	TM218		<240 M	<12 M	<12 M	<600 M	85 M	75.6 M
Acenaphthene	<8 µg/kg	TM218		<160 M	67.9 M	<8 M	<400 M	22.9 M	17.5 M
Fluorene	<10 µg/kg	TM218		<200 M	82.4 M	<10 M	<500 M	62.2 M	58.8 M
Phenanthrene	<15 µg/kg	TM218		540 M	1450 M	54.5 M	4160 M	557 M	407 M
Anthracene	<16 µg/kg	TM218		<320 M	286 M	19.9 M	<800 M	148 M	112 M
Fluoranthene	<17 µg/kg	TM218		1120 M	1720 M	142 M	4720 M	1200 M	596 M
Pyrene	<15 µg/kg	TM218		864 M	1240 M	119 M	3890 M	969 M	468 M
Benz(a)anthracene	<14 µg/kg	TM218		577 M	601 M	85.4 M	1710 M	669 M	320 M
Chrysene	<10 µg/kg	TM218		456 M	495 M	88 M	2280 M	709 M	359 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		859 M	455 M	110 M	2540 M	977 M	474 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<280 M	160 M	33.6 M	<700 M	300 M	136 M
Benzo(a)pyrene	<15 µg/kg	TM218		480 M	259 M	67.3 M	1220 M	568 M	282 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		407 M	137 M	42.2 M	1310 M	434 M	229 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<460 M	36 M	<23 M	<1150 M	103 M	51.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<480 M	126 M	40.3 M	<1200 M	399 M	211 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5520	7130	801	21800	7430	4130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.6	79.4	77.7	77.7	72.3	79.5
Acenaphthene-d10 % recovery**	%	TM218		79.4	77.9	81.3	80.5	77.9	81.7
Phenanthrene-d10 % recovery**	%	TM218		80.9	80.1	87.4	81	79.1	82.5
Chrysene-d12 % recovery**	%	TM218		77.2	75.5	92.4	78.8	85.5	85.8
Perylene-d12 % recovery**	%	TM218		74.3	72.6	82.8	70.2	76.4	81.2
Naphthalene	<9 µg/kg	TM218		87.2 M	85.9 M	722 M	249 M	1130 M	69.5 M
Acenaphthylene	<12 µg/kg	TM218		37.3 M	24.1 M	274 M	75.8 M	1710 M	21.8 M
Acenaphthene	<8 µg/kg	TM218		16.1 M	<8 M	<8 M	<8 M	<40 M	<8 M
Fluorene	<10 µg/kg	TM218		27 M	14.1 M	199 M	47 M	1980 M	15.1 M
Phenanthrene	<15 µg/kg	TM218		366 M	171 M	2070 M	516 M	12900 M	166 M
Anthracene	<16 µg/kg	TM218		88.5 M	39.9 M	524 M	143 M	3240 M	37.9 M
Fluoranthene	<17 µg/kg	TM218		672 M	264 M	2920 M	733 M	15400 M	235 M
Pyrene	<15 µg/kg	TM218		550 M	215 M	2140 M	567 M	10900 M	172 M
Benz(a)anthracene	<14 µg/kg	TM218		361 M	143 M	1190 M	320 M	5830 M	98 M
Chrysene	<10 µg/kg	TM218		391 M	156 M	1150 M	336 M	5380 M	104 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		591 M	235 M	1580 M	404 M	6680 M	119 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		208 M	70.9 M	464 M	123 M	2250 M	36.3 M
Benzo(a)pyrene	<15 µg/kg	TM218		371 M	138 M	904 M	227 M	4210 M	69.2 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		350 M	143 M	672 M	163 M	2960 M	51.6 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		70 M	26.5 M	150 M	37.8 M	655 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		318 M	132 M	627 M	157 M	2720 M	48.3 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4500	1860	15600	4100	78000	1240

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.3	82.2	79.7	81.8	79.9	81.2
Acenaphthene-d10 % recovery**	%	TM218		84.6	79.9	81.4	83.4	78.7	79.8
Phenanthrene-d10 % recovery**	%	TM218		84.3	81.5	86	85.2	80.7	81.5
Chrysene-d12 % recovery**	%	TM218		88	73.8	90	89.9	74.3	76.7
Perylene-d12 % recovery**	%	TM218		79.6	70	82.9	85.1	70.1	72.7
Naphthalene	<9 µg/kg	TM218		283 M	80.4 #	475 M	39.1 M	72 M	87.2 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	<12 #	371 M	<12 M	22.8 M	39.8 M
Acenaphthene	<8 µg/kg	TM218		<80 M	<8 #	<8 M	<8 M	27.5 M	9.59 M
Fluorene	<10 µg/kg	TM218		116 M	<10 #	225 M	<10 M	23.3 M	32.5 M
Phenanthrene	<15 µg/kg	TM218		864 M	166 #	2030 M	100 M	295 M	253 M
Anthracene	<16 µg/kg	TM218		233 M	<16 #	547 M	<16 M	65.3 M	61.2 M
Fluoranthene	<17 µg/kg	TM218		1450 M	48.6 #	4190 M	89.7 M	506 M	362 M
Pyrene	<15 µg/kg	TM218		1150 M	35 #	3200 M	67.6 M	438 M	279 M
Benz(a)anthracene	<14 µg/kg	TM218		763 M	20.4 #	2100 M	52 M	257 M	161 M
Chrysene	<10 µg/kg	TM218		866 M	35.5 #	2010 M	76.5 M	323 M	169 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1190 M	33.6 #	3070 M	77.3 M	459 M	226 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		340 M	<14 #	945 M	22.2 M	142 M	74.4 M
Benzo(a)pyrene	<15 µg/kg	TM218		725 M	<15 #	1930 M	45.2 M	239 M	132 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		559 M	<18 #	1540 M	38.3 M	242 M	118 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 M	<23 #	354 M	<23 M	49.1 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		549 M	<24 #	1480 M	40.2 M	223 M	110 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9080	420	24500	648	3390	2120

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		80.1	78.6	80.5	87.8	78.5
Acenaphthene-d10 % recovery**	%	TM218		79.9	82.6	82.5	86	81.6
Phenanthrene-d10 % recovery**	%	TM218		82.5	89	82.9	90.5	84.9
Chrysene-d12 % recovery**	%	TM218		79.6	94.8	78.4	111	91.5
Perylene-d12 % recovery**	%	TM218		75	85.5	73.4	102	88.5
Naphthalene	<9 µg/kg	TM218		297 M	609 M	508 M	131 M	146 M
Acenaphthylene	<12 µg/kg	TM218		64.4 M	194 M	184 M	77.6 M	59.3 M
Acenaphthene	<8 µg/kg	TM218		24.7 M	34.5 M	24.3 M	62.6 M	25.4 M
Fluorene	<10 µg/kg	TM218		54 M	154 M	162 M	77 M	47.6 M
Phenanthrene	<15 µg/kg	TM218		433 M	1350 M	1080 M	636 M	420 M
Anthracene	<16 µg/kg	TM218		109 M	364 M	231 M	144 M	132 M
Fluoranthene	<17 µg/kg	TM218		619 M	2020 M	1190 M	1270 M	706 M
Pyrene	<15 µg/kg	TM218		482 M	1510 M	852 M	1000 M	612 M
Benz(a)anthracene	<14 µg/kg	TM218		299 M	1050 M	437 M	701 M	330 M
Chrysene	<10 µg/kg	TM218		337 M	1110 M	454 M	668 M	363 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		428 M	1490 M	576 M	983 M	464 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		158 M	462 M	205 M	351 M	135 M
Benzo(a)pyrene	<15 µg/kg	TM218		243 M	847 M	322 M	553 M	272 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		220 M	681 M	281 M	426 M	208 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		48 M	161 M	60.1 M	86.2 M	45.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		201 M	628 M	250 M	401 M	198 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4020	12700	6820	7570	4160

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		79.6	133 4	92.7	51.1 4	58.1 4	72.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1110	<1000	<1000	27600	4250	1270
Aliphatics >C21-C35	<1000 µg/kg	TM414		2410	<1000	<1000	1010000	12600	3580
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1330000	1870	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	<5000	2370000	19000	5230
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		62700	<10000	<10000	3400000	49500	24600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2260	3770	<1000	18800	4960	2270
Aromatics > EC21-EC35	<1000 µg/kg	TM414		43200	3670	<1000	930000	21400	8870
Aromatics >EC35-EC44	<1000 µg/kg	TM414		12600	<1000	<1000	85300	3540	7870
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1530	<1000	<1000	<10000	<1000	4210
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		58100	8500	<5000	1030000	30500	19400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		58100	<10000	<10000	3400000	49500	24600
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 4	<20	<20 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		63.6 4	107	38.7 4	60.5 4	31.4 4	80.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	23.3 4	29.7 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	22.2 4	36.1 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2020	<1000	1290	1290	2650	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		6330	<1000	6190	5960	15100	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		28000	2290	41300	23700	49900	5370
Aliphatics >C35-C44	<1000 µg/kg	TM414		2020	<1000	11000	5390	19100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		39200	<5000	59800	36300	86800	5800
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		123000	40800	101000	54900	160000	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	14.4 4	24.5 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	1880	<1000	3450	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6460	<1000	10000	2190	14700	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		53100	25800	27400	15000	49800	1610
Aromatics >EC35-EC44	<1000 µg/kg	TM414		22800	11400	1320	<1000	4550	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5060	2010	<1000	<1000	1430	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		83400	37900	41500	18600	73500	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		123000	37900	101000	55000	160000	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	65.8 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	65.8 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		68.6 4	72	49.5 4	79.3	118	118
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2330	<1000	<1000	<1000	1260	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		14300	<1000	1390	<1000	11700	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		73900	<1000	13800	2530	76800	7910
Aliphatics >C35-C44	<1000 µg/kg	TM414		35400	<1000	2230	<1000	26100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		126000	<5000	17900	<5000	116000	8850
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	2590	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4300	<1000	32200	<1000	1390	1010
Aromatics > EC21-EC35	<1000 µg/kg	TM414		35300	<1000	76000	2230	14700	4240
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3160	<1000	8600	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		43600	<5000	120000	<5000	17300	6260
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		82.1	25.9 4	71.5	98.6	72.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	13.4	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		41.7	<10 4	61.6	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		38.4	<10 4	67.2	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		1220	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		8050	1530	1210	3470	1330
Aliphatics >C16-C21	<1000 µg/kg	TM414		19800	7720	5090	16200	47600
Aliphatics >C21-C35	<1000 µg/kg	TM414		76100	35700	25100	94200	22800
Aliphatics >C35-C44	<1000 µg/kg	TM414		30000	10500	8860	42400	12500
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		135000	55500	40200	156000	84200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		189000	81600	68800	190000	150000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		12.1	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		25.2	<10 4	44.8	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3640	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		11000	4110	3750	3490	12900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		36300	19800	20900	28300	41600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2150	1530	2890	1300	10400
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1120	<1000	2650
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		53700	26200	28600	33500	65900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		189000	81600	69000	190000	150000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		80.1	<50 4	142	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		80.1	<20 4	142	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	112	115	118	106	109
Toluene-d8**	%	TM116		96	99.1	98.3	93.2	97.3	99.1
4-Bromofluorobenzene**	%	TM116		95.7	96.5	97.8	88.1	90	97.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	110	100	100	99.3	111
Toluene-d8**	%	TM116		95.3	98	94.7	96.8	92.9	99.5
4-Bromofluorobenzene**	%	TM116		88.1	94.5	87.6	88	85.4	94.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	441 M	<260 M	320 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	113	102	113	110	112
Toluene-d8**	%	TM116		94.5	100	95.2	99.7	98.4	99.1
4-Bromofluorobenzene**	%	TM116		90.6	87.6	89.1	93.2	100	96.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		286 M	<260 #	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Dibromofluoromethane**	%	TM116		116	105	105	112	109
Toluene-d8**	%	TM116		96.2	94.1	95	99.4	97.7
4-Bromofluorobenzene**	%	TM116		95.4	79.1	87.6	94.7	94.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ21-1 0.30 - 0.30 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652632 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652642 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK22-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652548 TM048	08/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652657 TM048	08/02/21	Eva Guerra	bundle of fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P20-1 0.50 - 0.50 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652671 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652557 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q20-1 0.60 - 0.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652565 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652577 TM048	08/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	Q22-2 1.70 - 1.70 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652623 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652585 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-3 2.20 - 2.20 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652594 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R22-2 1.60 - 1.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652613 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23652632	23652638	23652642	23652650	23652548	23652599	23652657	23652664	23652671	23652552
Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2	AL21-1	AL21-2	P20-1	P20-2
AGS Ref.										
Depth	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021

Lab Sample No(s)	23652557	23652561	23652565	23652571	23652577	23652581	23652618	23652623	23652585	23652589
Customer Sample Ref.	P21-1	P21-2	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2	R21-1	R21-2
AGS Ref.										
Depth	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	08-Feb-2021		09-Feb-2021		08-Feb-2021			09-Feb-2021	09-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021
pH	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	12-Feb-2021	12-Feb-2021	09-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	12-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021

Lab Sample No(s)	23652594	23652609	23652613
Customer Sample Ref.	R21-3	R22-1	R22-2
AGS Ref.			
Depth	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021
PAH by GCMS	04-Feb-2021	09-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
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BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210206-39
Your Reference:	P18-669
Location:	Llanwern
Report No:	587491

This report has been revised and directly supersedes 587296 in its entirety.

We received 16 samples on Saturday February 06, 2021 and 16 of these samples were scheduled for analysis which was completed on Friday February 19, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

ALS Life Sciences Limited. Registered Office: Units 7 & 8 Hawarden Business Park, Manor Road, Hawarden, Deeside, CH5 3US. Registered in England and Wales No. 4057291.

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23677975	S16-1		0.90 - 0.90	04/02/2021
23678020	S16-2		2.20 - 2.20	04/02/2021
23678025	S18-1		0.70 - 0.70	04/02/2021
23678034	S19-1		1.00 - 1.00	04/02/2021
23678039	S19-2		2.00 - 2.00	04/02/2021
23677997	S21-1		0.50 - 0.50	05/02/2021
23678005	S21-2		1.80 - 1.80	05/02/2021
23678009	S22-1		0.50 - 0.50	05/02/2021
23678013	S22-2		1.30 - 1.30	05/02/2021
23677984	T21-1		1.00 - 1.00	05/02/2021
23677989	T21-2		2.00 - 2.00	05/02/2021
23678044	U19-1		0.30 - 0.30	05/02/2021
23678051	U20-1		0.80 - 0.80	05/02/2021
23678058	U20-2		1.30 - 1.30	05/02/2021
23678064	U21-1		0.50 - 0.50	05/02/2021
23677979	U21-2		1.40 - 1.40	05/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23677975		23678020		23678025		23678034		23678039		23677997		23678005		23678009				
Customer Sample Reference			S16-1		S16-2		S18-1		S19-1		S19-2		S21-1		S21-2		S22-1				
AGS Reference																					
Depth (m)			0.90 - 0.90		2.20 - 2.20		0.70 - 0.70		1.00 - 1.00		2.00 - 2.00		0.50 - 0.50		1.80 - 1.80		0.50 - 0.50				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 8	X					X					X			X					X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2											X			X					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 16			X		X			X		X			X			X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
PAH by GCMS	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
pH	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Sample description	All	NDPs: 0 Tests: 15		X		X			X		X			X			X		X		
Total Organic Carbon	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
VOC MS (S)	All	NDPs: 0 Tests: 16			X		X			X		X			X			X		X	

23677979	U21-2		1.40 - 1.40	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23678064	U21-1		0.50 - 0.50	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23678058	U20-2		1.30 - 1.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23678051	U20-1		0.80 - 0.80	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23678044	U19-1		0.30 - 0.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23677989	T21-2		2.00 - 2.00	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23677984	T21-1		1.00 - 1.00	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23678013	S22-2		1.30 - 1.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23678009	S22-1		0.50 - 0.50	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x			x	x				

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23677975	S16-1	0.90 - 0.90	Dark Brown	Loamy Sand	Stones	None
23678020	S16-2	2.20 - 2.20	Dark Brown	Sand	Stones	Crushed Brick
23678025	S18-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23678034	S19-1	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	Vegetation
23678039	S19-2	2.00 - 2.00	Dark Brown	Sand	Stones	Vegetation
23677997	S21-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23678005	S21-2	1.80 - 1.80	Dark Brown	Loamy Sand	Stones	Vegetation
23678009	S22-1	0.50 - 0.50	Dark Brown	Loamy Sand	Vegetation	Brick
23678013	S22-2	1.30 - 1.30	Dark Brown	Sandy Loam	Stones	Vegetation
23677984	T21-1	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	None
23677989	T21-2	2.00 - 2.00	Dark Brown	Loamy Sand	Stones	Vegetation
23678044	U19-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	Vegetation
23678051	U20-1	0.80 - 0.80	Dark Brown	Loamy Sand	Stones	Coal fragments
23678058	U20-2	1.30 - 1.30	Dark Brown	Stone/Soil	Stones	Vegetation
23678064	U21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Brick
23677979	U21-2	1.40 - 1.40	Dark Brown	Loamy Sand	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	19	11	14	16	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0113 M	<0.01 M	<0.01 M	0.0116 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0116 M	0.0119 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		61.7 #	32.1 #	4.47 #	62.9 #	33.6 #	45.2 #
pH	1 pH Units	TM133		11.1 M	8.96 M	12.6 M	10.1 M	11 M	10.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	6.47 M	<6 M	7.62 M	9.93 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	0.459 M	<0.2 M	0.956 M
Chromium	<0.9 mg/kg	TM181		83.6 M	11.7 M	458 M	51 M	123 M	120 M
Copper	<1.4 mg/kg	TM181		<14 M	22.6 M	<14 M	<14 M	28 M	29.9 M
Iron	<1000 mg/kg	TM181		40100 #	24200 #	134000 #	34500 #	47100 #	59200 #
Lead	<0.7 mg/kg	TM181		22.2 M	20.2 M	9.23 M	66.1 M	64.8 M	52.4 M
Manganese	<0.13 mg/kg	TM181		4880 M	4100 M	29000 M	3280 M	8070 M	9620 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		8.99 M	19.9 M	2.79 M	11.7 M	18.1 M	10.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		94.1 #	31.1 #	458 #	57.3 #	134 #	245 #
Zinc	<1.9 mg/kg	TM181		55.3 M	73.8 M	60.5 M	88.3 M	113 M	183 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	<0.001 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	<0.001 #
Additional Asbestos Components (Using TM048)		TM304						None #	None #
Analysts Comments		TM304						N/A	0
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	<0.001 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	15	21	16	17	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0124 M	<0.01 M	0.0127 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		16.5 #	21.7 #	24.3 #	37.2 #	36.7 #	8.26 #
pH	1 pH Units	TM133		11.2 M	10.2 M	9.63 M	10.8 M	10.4 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.9 M	<6 M	11.6 M	<6 M	6.59 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.44 M	0.592 M	1.44 M	<0.2 M	0.597 M	0.889 M
Chromium	<0.9 mg/kg	TM181		182 M	133 M	85.7 M	44.9 M	179 M	476 M
Copper	<1.4 mg/kg	TM181		44.7 M	19.9 M	23.6 M	25.4 M	18.6 M	<14 M
Iron	<1000 mg/kg	TM181		70900 #	65500 #	122000 #	66400 #	59400 #	154000 #
Lead	<0.7 mg/kg	TM181		75 M	44.6 M	114 M	58 M	51.7 M	31.5 M
Manganese	<0.13 mg/kg	TM181		4170 M	6900 M	7740 M	2400 M	8280 M	28200 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		24.9 M	17.8 M	23.8 M	17.9 M	16.4 M	10.1 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	12 #
Vanadium	<0.2 mg/kg	TM181		101 #	122 #	183 #	48.5 #	245 #	409 #
Zinc	<1.9 mg/kg	TM181		239 M	89.9 M	353 M	127 M	107 M	86.1 M

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.4	15	11	13		
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 #	<12 M	<12 M		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M		
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M		
Soil Organic Matter (SOM)	<0.35 %	TM132		7.57 #	4.86 #	33.1 #	9.09 #		
pH	1 pH Units	TM133		10.9 M	10.1 #	9.8 M	10.4 M		
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M		
Arsenic	<0.6 mg/kg	TM181		<6 M	6.86 #	7.16 M	7.62 M		
Cadmium	<0.02 mg/kg	TM181		0.349 M	0.645 #	<0.2 M	0.892 M		
Chromium	<0.9 mg/kg	TM181		<9 M	64.2 #	21.5 M	14 M		
Copper	<1.4 mg/kg	TM181		<14 M	15.6 #	33.3 M	16.8 M		
Iron	<1000 mg/kg	TM181		17100 #	51900 #	215000 #	81800 #		
Lead	<0.7 mg/kg	TM181		24.6 M	424 #	169 M	91.7 M		
Manganese	<0.13 mg/kg	TM181		1380 M	6270 #	3200 M	6760 M		
Mercury	<0.1 mg/kg	TM181		<1 M	<1 #	<1 M	<1 M		
Nickel	<0.2 mg/kg	TM181		12.4 M	12.4 #	42 M	13.1 M		
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #		
Vanadium	<0.2 mg/kg	TM181		19.1 #	89.5 #	49.8 #	78.8 #		
Zinc	<1.9 mg/kg	TM181		57.9 M	95.3 #	117 M	108 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		101	98.6	95.8	104	82.9	79.9
Acenaphthene-d10 % recovery**	%	TM218		102	98.4	96.6	108	86.8	82.7
Phenanthrene-d10 % recovery**	%	TM218		101	98.2	94.5	98.6	87	86.4
Chrysene-d12 % recovery**	%	TM218		89.9	86.3	89.9	96.8	77.8	75.8
Perylene-d12 % recovery**	%	TM218		77.3	87.3	86.1	83.3	75.7	72.7
Naphthalene	<9 µg/kg	TM218		376 M	169 M	450 M	3270 M	3630 M	1170 M
Acenaphthylene	<12 µg/kg	TM218		28 M	39.1 M	61.8 M	1810 M	5690 M	464 M
Acenaphthene	<8 µg/kg	TM218		53.7 M	17.1 M	10.2 M	184 M	415 M	79.3 M
Fluorene	<10 µg/kg	TM218		150 M	43.7 M	55.8 M	1220 M	6780 M	751 M
Phenanthrene	<15 µg/kg	TM218		649 M	257 M	592 M	11800 M	36400 M	5970 M
Anthracene	<16 µg/kg	TM218		72.7 M	46.9 M	89.2 M	2370 M	7660 M	1380 M
Fluoranthene	<17 µg/kg	TM218		358 M	287 M	526 M	16900 M	42000 M	8180 M
Pyrene	<15 µg/kg	TM218		298 M	216 M	372 M	12000 M	28900 M	6080 M
Benz(a)anthracene	<14 µg/kg	TM218		165 M	120 M	233 M	7070 M	13700 M	3000 M
Chrysene	<10 µg/kg	TM218		286 M	131 M	248 M	6690 M	12000 M	2890 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		271 M	114 M	377 M	8550 M	15700 M	3730 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		78.3 M	51.6 M	118 M	3230 M	5310 M	1140 M
Benzo(a)pyrene	<15 µg/kg	TM218		135 M	98.8 M	185 M	5230 M	10100 M	2310 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		87.3 M	89.1 M	162 M	3040 M	7000 M	1890 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		34.4 M	<23 M	42.7 M	811 M	1170 M	365 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		127 M	82.9 M	179 M	3230 M	6440 M	1530 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3170	1760	3700	87300	203000	40900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.7	98.5	97	82.1	82.6	98.9
Acenaphthene-d10 % recovery**	%	TM218		83.5	96.4	94.5	81.9	83.3	97
Phenanthrene-d10 % recovery**	%	TM218		86.1	97.5	96	83.2	84.2	97.8
Chrysene-d12 % recovery**	%	TM218		84.1	99.5	94.6	75.6	80.8	96.7
Perylene-d12 % recovery**	%	TM218		80.6	106	100	70.7	75.7	101
Naphthalene	<9 µg/kg	TM218		1130 M	577 M	649 M	720 M	420 M	282 M
Acenaphthylene	<12 µg/kg	TM218		226 M	604 M	347 M	269 M	210 M	98.6 M
Acenaphthene	<8 µg/kg	TM218		527 M	36.5 M	38.4 M	<40 M	19.8 M	<8 M
Fluorene	<10 µg/kg	TM218		460 M	463 M	220 M	194 M	131 M	55.9 M
Phenanthrene	<15 µg/kg	TM218		1650 M	3250 M	1910 M	1670 M	1130 M	1040 M
Anthracene	<16 µg/kg	TM218		436 M	1790 M	616 M	352 M	269 M	234 M
Fluoranthene	<17 µg/kg	TM218		1880 M	6500 M	3600 M	2120 M	1810 M	1600 M
Pyrene	<15 µg/kg	TM218		1460 M	4690 M	2660 M	1540 M	1330 M	1090 M
Benz(a)anthracene	<14 µg/kg	TM218		776 M	2500 M	1490 M	823 M	776 M	652 M
Chrysene	<10 µg/kg	TM218		775 M	2470 M	1270 M	859 M	793 M	680 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1030 M	3430 M	1610 M	1020 M	1030 M	617 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		324 M	1130 M	606 M	322 M	341 M	293 M
Benzo(a)pyrene	<15 µg/kg	TM218		673 M	2320 M	1340 M	627 M	660 M	505 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		474 M	1830 M	1060 M	448 M	498 M	429 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		90.9 M	335 M	194 M	<115 M	88.9 M	79.3 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		456 M	1580 M	929 M	445 M	494 M	378 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		12400	33500	18600	11400	10000	8040

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		104	102	91.2	84.5		
Acenaphthene-d10 % recovery**	%	TM218		101	98.4	94.9	85.6		
Phenanthrene-d10 % recovery**	%	TM218		97.1	98.4	94.4	87.6		
Chrysene-d12 % recovery**	%	TM218		93	95.5	89.8	84.5		
Perylene-d12 % recovery**	%	TM218		90.7	104	78.1	82.2		
Naphthalene	<9 µg/kg	TM218		157 M	55.6 #	1080 M	198 M		
Acenaphthylene	<12 µg/kg	TM218		<12 M	14.7 #	394 M	73.7 M		
Acenaphthene	<8 µg/kg	TM218		13.4 M	10.2 #	28.6 M	12.6 M		
Fluorene	<10 µg/kg	TM218		41 M	13.2 #	232 M	49.3 M		
Phenanthrene	<15 µg/kg	TM218		225 M	130 #	2850 M	403 M		
Anthracene	<16 µg/kg	TM218		32.6 M	23.7 #	758 M	96.6 M		
Fluoranthene	<17 µg/kg	TM218		114 M	173 #	5170 M	579 M		
Pyrene	<15 µg/kg	TM218		87.1 M	145 #	3580 M	428 M		
Benz(a)anthracene	<14 µg/kg	TM218		60 M	122 #	2220 M	284 M		
Chrysene	<10 µg/kg	TM218		97.2 M	146 #	1940 M	301 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		86.2 M	152 #	2870 M	398 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		19.6 M	73.4 #	893 M	140 M		
Benzo(a)pyrene	<15 µg/kg	TM218		44.8 M	145 #	1600 M	243 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		31.3 M	139 #	1130 M	182 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	28.2 #	266 M	37 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		45 M	129 #	1050 M	210 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1050	1500	26100	3640		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		14.8 4	134 4	59 4	9 4	88.5	15.6 4
Aliphatics >C5-C6	<10 µg/kg	TM089		71.2 4	14.9 4	<10 4	<10 4	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		359 4	45.9 4	18.1 4	<10 4	29.8	14.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		295 4	64.5 4	42.9 4	<10 4	39.3	11.9 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		17600	<1000	<1000	2780	<1000	1270
Aliphatics >C12-C16	<1000 µg/kg	TM414		77200	8060	<1000	6670	1800	4620
Aliphatics >C16-C21	<1000 µg/kg	TM414		87500	15800	2800	19800	9370	10400
Aliphatics >C21-C35	<1000 µg/kg	TM414		60000	16600	37000	42500	32100	38700
Aliphatics >C35-C44	<1000 µg/kg	TM414		12000	3110	4790	6510	8590	10900
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		254000	43600	45200	78200	52200	66000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		323000	59500	59400	249000	120000	187000
Aromatics >EC5-EC7	<10 µg/kg	TM089		91.5 4	<10 4	<10 4	<10 4	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		115 4	11.2 4	<10 4	<10 4	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		197 4	42.2 4	28.3 4	<10 4	26.2	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		4410	<1000	<1000	4810	2530	2110
Aromatics > EC12-EC16	<1000 µg/kg	TM414		31500	2420	1860	12400	4920	7470
Aromatics > EC16-EC21	<1000 µg/kg	TM414		14500	2830	1930	48400	19700	27800
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17200	9700	9170	100000	38200	77400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	4810	2880	6620
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		68800	16000	14200	171000	68300	121000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		324000	59700	59500	249000	121000	188000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		725 4	125 4	61 4	<50 4	69	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		403 4	53.3 4	<50 4	<50 4	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		1130 4	179 4	61 4	<20 4	69	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		15.4 4	73	44.8 4	26 4	31.1 4	56.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		13.6 4	<10	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		65.7 4	32.8	27.9 4	<10 4	13.3 4	11.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		68.2 4	55	33 4	<10 4	12.1 4	12.4 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1580	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		10400	<1000	<1000	2950	3740	1500
Aliphatics >C16-C21	<1000 µg/kg	TM414		29900	<1000	3020	4120	5800	5900
Aliphatics >C21-C35	<1000 µg/kg	TM414		90400	2400	11100	10600	19300	59600
Aliphatics >C35-C44	<1000 µg/kg	TM414		21200	<1000	3300	2850	4450	10200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		153000	<5000	19000	21500	34900	77200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		226000	52400	84100	54800	84800	93000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		44.6 4	36.3	21.6 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1380	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9270	<1000	1720	3900	5130	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		19900	14000	17600	7530	12300	2430
Aromatics > EC21-EC35	<1000 µg/kg	TM414		41600	31200	41900	18600	30600	11700
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1290	2610	3230	2390	1140	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		73400	48700	65200	33300	49900	15800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		226000	48700	84200	54800	84800	93000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		148 4	87.8	61 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		148 4	87.8	61 4	<20 4	<20 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87	122	15 4	81		
Aliphatics >C5-C6	<10 µg/kg	TM089		14.2	<10	<10 4	17.3		
Aliphatics >C6-C8	<10 µg/kg	TM089		66.6	<10	<10 4	84		
Aliphatics >C8-C10	<10 µg/kg	TM089		50.2	<10	<10 4	109		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1150	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	3640	4230		
Aliphatics >C16-C21	<1000 µg/kg	TM414		2150	<1000	6390	14400		
Aliphatics >C21-C35	<1000 µg/kg	TM414		21000	1470	18600	28900		
Aliphatics >C35-C44	<1000 µg/kg	TM414		7370	<1000	4230	6140		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		31500	<5000	34000	54400		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		40900	11500	85100	84200		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		27.3	<10	<10 4	16.1		
Aromatics >EC8-EC10	<10 µg/kg	TM089		32.7	<10	<10 4	72.5		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	3780	1020		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1230	<1000	11000	5290		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		6190	7650	34400	22200		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	1160	1030		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		9410	9250	51100	29800		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		41100	<10000	85100	84500		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		131	<50	<50 4	210		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		60	<50	<50 4	88.6		
GRO >C5-C10	<20 µg/kg	TM089		191	<20	<20 4	299		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Dibromofluoromethane**	%	TM116		100	112	98.8	96.7	104	109
Toluene-d8**	%	TM116		92.9	97.6	96.1	88.3	94.8	95.7
4-Bromofluorobenzene**	%	TM116		76.8	94.3	89.9	72.2	87.7	86.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<2000 M
Benzene	<9 µg/kg	TM116		205 M	<180 M	<180 M	<180 M	<180 M	<1800 M
Toluene	<7 µg/kg	TM116		380 M	<140 M	<140 M	<140 M	<140 M	<1400 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<800 M
p/m-Xylene	<10 µg/kg	TM116		271 #	<200 #	<200 #	<200 #	<200 #	<2000 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<2000 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	341 M	337 M	4140 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<4
Sum of BTEX	<40 µg/kg	TM116		856	<800	<800	<800	<800	<8000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	105	97.9	108	108	106
Toluene-d8**	%	TM116		95.1	95.7	95.3	99.7	101	97
4-Bromofluorobenzene**	%	TM116		82.9	88.2	82.3	98.4	96.9	92.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<2000 M	<2000 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<1800 M	<1800 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<1400 M	<1400 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<800 M	<800 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<2000 #	<2000 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<2000 M	<2000 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<2600 M	<2600 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<4	<4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<8000	<8000	<800

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	112	98	109		
Toluene-d8**	%	TM116		98.6	97.9	93.3	97.1		
4-Bromofluorobenzene**	%	TM116		91.1	95.2	79	90.6		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M		
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M		
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M		
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M		
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #		
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M		
Naphthalene	<13 µg/kg	TM116		<260 M	<260 #	<260 M	<260 M		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4		
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800		

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S16-1 0.90 - 0.90 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677975 TM048	15/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S18-1 0.70 - 0.70 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678025 TM048	12/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S19-2 2.00 - 2.00 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678039 TM048	15/02/2021	Marcin Magdziarek	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S21-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677997 TM048	12/02/2021	Marcin Magdziarek	Soil containing ACM debris	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S22-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678009 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	T21-1 1.00 - 1.00 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677984 TM048	15/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	U20-1 0.80 - 0.80 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678051 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	U21-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678064 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	S19-2	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.00 - 2.00					
Sample Type	SOLID					
Date Sampled	04/02/2021 00:00:00					
Date Received	06/02/2021 05:00:00					
SDG	210206-39					
Original Sample	23678039					
Method Number	TM304					
Cust. Sample Ref.	S21-1	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.50 - 0.50					
Sample Type	SOLID					
Date Sampled	05/02/2021 00:00:00					
Date Received	06/02/2021 05:00:00					
SDG	210206-39					
Original Sample	23677997					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Test Completion Dates

Lab Sample No(s)	23677975	23678020	23678025	23678034	23678039	23677997	23678005	23678009	23678013	23677984
Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1	S21-2	S22-1	S22-2	T21-1
AGS Ref.										
Depth	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Asbestos ID in Solid Samples	15-Feb-2021		12-Feb-2021		15-Feb-2021	12-Feb-2021		12-Feb-2021		15-Feb-2021
Asbestos Quantification - Full					19-Feb-2021	18-Feb-2021				
Cyanide Comp/Free/Total/Thiocyanate	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
EPH CWG GC (S)	11-Feb-2021	11-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	10-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021
GRO by GC-FID (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Metals in solid samples by OES	11-Feb-2021	11-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021	12-Feb-2021	15-Feb-2021	15-Feb-2021	11-Feb-2021
PAH by GCMS	15-Feb-2021	11-Feb-2021	12-Feb-2021	16-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021
pH	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Phenols by HPLC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Sample description	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Total Organic Carbon	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021
TPH CWG GC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
VOC MS (S)	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	14-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	14-Feb-2021

Lab Sample No(s)	23677989	23678044	23678051	23678058	23678064	23677979
Customer Sample Ref.	T21-2	U19-1	U20-1	U20-2	U21-1	U21-2
AGS Ref.						
Depth	2.00 - 2.00	0.30 - 0.30	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Asbestos ID in Solid Samples			12-Feb-2021		12-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
EPH CWG GC (S)	10-Feb-2021	10-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021
GRO by GC-FID (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Metals in solid samples by OES	15-Feb-2021	15-Feb-2021	12-Feb-2021	15-Feb-2021	11-Feb-2021	15-Feb-2021
PAH by GCMS	11-Feb-2021	11-Feb-2021	15-Feb-2021	11-Feb-2021	12-Feb-2021	11-Feb-2021
pH	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Phenols by HPLC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Sample description	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Total Organic Carbon	15-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021
TPH CWG GC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
VOC MS (S)	14-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	24 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210212-101
Your Reference:	P18-669
Location:	Llanwern
Report No:	587965

We received 19 samples on Friday February 12, 2021 and 19 of these samples were scheduled for analysis which was completed on Tuesday February 23, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan
Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23716424	SPLA-1		0.20 - 0.20	11/02/2021
23716430	SPLA-2		0.20 - 0.20	11/02/2021
23716436	SPLA-3		0.20 - 0.20	11/02/2021
23716443	SPLA-4		0.20 - 0.20	11/02/2021
23716403	SPLP-1		0.20 - 0.20	11/02/2021
23716409	SPLP-2		0.20 - 0.20	11/02/2021
23716417	SPLP-3		0.20 - 0.20	11/02/2021
23716468	W213-1		0.20 - 0.20	11/02/2021
23716473	W213-2		0.20 - 0.20	11/02/2021
23716480	W213-3		0.20 - 0.20	11/02/2021
23716485	W213-4		0.20 - 0.20	11/02/2021
23716489	W213-5		0.20 - 0.20	11/02/2021
23716387	W213-6		0.20 - 0.20	11/02/2021
23716392	W213-7		0.20 - 0.20	11/02/2021
23716399	W213-8		0.20 - 0.20	11/02/2021
23716382	W300-1		0.20 - 0.20	11/02/2021
23716449	W300-2		0.20 - 0.20	11/02/2021
23716453	W300-3		0.20 - 0.20	11/02/2021
23716459	W300-4		0.20 - 0.20	11/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23716424		23716430		23716436		23716443		23716403		23716409		23716417		23716468				
Customer Sample Reference			SPLA-1		SPLA-2		SPLA-3		SPLA-4		SPLP-1		SPLP-2		SPLP-3		W213-1				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)		
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10			X					X			X					X			X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
PAH by GCMS	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
pH	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
Sample description	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X			X		X			X		
VOC MS (S)	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		

23716382	W300-1		0.20 - 0.20	250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
				1kg TUB with Handle (ALE260)	S			X															
23716399	W213-8		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
23716392	W213-7		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
				1kg TUB with Handle (ALE260)	S			X															
23716387	W213-6		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
23716489	W213-5		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
				1kg TUB with Handle (ALE260)	S			X															
23716485	W213-4		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
23716480	W213-3		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
				1kg TUB with Handle (ALE260)	S			X															
23716473	W213-2		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	
23716468	W213-1		0.20 - 0.20	60g VOC (ALE215)	S								X										X
				250g Amber Jar (ALE210)	S		X			X		X				X		X		X		X	

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)							
			23716382	23716449			23716453			23716459
			Customer Sample Reference							
			W300-1	W300-2			W300-3			W300-4
			AGS Reference							
			Depth (m)							
			0.20 - 0.20	0.20 - 0.20			0.20 - 0.20			0.20 - 0.20
			Container							
			60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type							
			S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10				X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19	X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 19		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 19		X			X		X	
pH	All	NDPs: 0 Tests: 19		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19		X			X		X	
Sample description	All	NDPs: 0 Tests: 19		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 19		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 19	X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23716424	SPLA-1	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23716430	SPLA-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716436	SPLA-3	0.20 - 0.20	Grey	Sandy Clay Loam	Stones	Vegetation
23716443	SPLA-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716403	SPLP-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716409	SPLP-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716417	SPLP-3	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23716468	W213-1	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716473	W213-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716480	W213-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716485	W213-4	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716489	W213-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716387	W213-6	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716392	W213-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716399	W213-8	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716382	W300-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716449	W300-2	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716453	W300-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716459	W300-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		32	22	35	27	27	20
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0137 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.34 #	9.22 #	3.71 #	15.9 #	31.2 #	6.78 #
pH	1 pH Units	TM133		7.89 M	8.44 M	8.18 M	8.31 M	8.57 M	9.36 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		12.1 M	18.7 M	13.5 M	10.4 M	9.96 M	12.2 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	1.09 M	<0.2 M	0.706 M	0.826 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		38.6 M	32.1 M	39.8 M	22.4 M	90.8 M	50.9 M
Copper	<1.4 mg/kg	TM181		18.6 M	13 M	<14 M	25.2 M	12.3 M	25.8 M
Iron	<1000 mg/kg	TM181		75000 #	129000 #	47200 #	21300 #	93700 #	98100 #
Lead	<0.7 mg/kg	TM181		36.6 M	32.7 M	32.8 M	56 M	19.8 M	85.6 M
Manganese	<0.13 mg/kg	TM181		1590 M	2120 M	772 M	1760 M	11600 M	3540 M
Mercury	<0.1 mg/kg	TM181		<1 M	0.154 M	<1 M	<0.1 M	<0.1 M	<1 M
Nickel	<0.2 mg/kg	TM181		33.4 M	24.6 M	39.6 M	22.2 M	14.5 M	25.8 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<10 #	<1 #	3.31 #	<10 #
Vanadium	<0.2 mg/kg	TM181		63.8 #	80.8 #	57.3 #	28.4 #	192 #	101 #
Zinc	<1.9 mg/kg	TM181		135 M	129 M	133 M	254 M	74.2 M	267 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		28	13	12	18	9.8	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		11.1 #	6.74 #	7.69 #	6.02 #	22.2 #	8.21 #
pH	1 pH Units	TM133		8.52 M	8.9 M	8.74 M	8.59 M	8.63 M	8.86 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	2.04 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		11 M	14.4 M	13.1 M	20.2 M	9.93 M	67 M
Cadmium	<0.02 mg/kg	TM181		0.856 M	1.11 M	0.356 M	1.39 M	<0.2 M	0.577 M
Chromium	<0.9 mg/kg	TM181		312 M	59.7 M	50 M	68.5 M	34.2 M	18.6 M
Copper	<1.4 mg/kg	TM181		21.6 M	31.8 M	81.9 M	30.7 M	27.8 M	91.4 M
Iron	<1000 mg/kg	TM181		116000 #	65400 #	52400 #	76900 #	33400 #	45900 #
Lead	<0.7 mg/kg	TM181		21.5 M	90.7 M	142 M	121 M	42.6 M	253 M
Manganese	<0.13 mg/kg	TM181		14300 M	4490 M	2850 M	4420 M	2050 M	657 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<1 M	<0.1 M	<1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		24.1 M	21.7 M	27.2 M	31.9 M	18.9 M	24.5 M
Selenium	<1 mg/kg	TM181		3.43 #	1.1 #	<10 #	<1 #	<10 #	<1 #
Vanadium	<0.2 mg/kg	TM181		701 #	61.6 #	91.2 #	142 #	45.4 #	34 #
Zinc	<1.9 mg/kg	TM181		148 M	267 M	376 M	401 M	103 M	207 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	14	11	10	14	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0113 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0113 M	0.0111 M	0.0116 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.55 #	7.76 #	25.2 #	2.6 #	2.67 #	5.6 #
pH	1 pH Units	TM133		8.56 M	8.68 M	10.7 M	8.95 M	10.2 M	9.46 M
Cyanide, Total	<1 mg/kg	TM153		1.43 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		14.6 M	13 M	6.51 M	4.93 M	17.7 M	47.2 M
Cadmium	<0.02 mg/kg	TM181		0.326 M	1.39 M	<0.2 M	0.281 M	<0.2 M	1.28 M
Chromium	<0.9 mg/kg	TM181		111 M	162 M	267 M	9.54 M	256 M	127 M
Copper	<1.4 mg/kg	TM181		29.7 M	26.3 M	20.8 M	12.3 M	34.9 M	52.8 M
Iron	<1000 mg/kg	TM181		86800 #	86900 #	105000 #	10500 #	169000 #	119000 #
Lead	<0.7 mg/kg	TM181		174 M	85.1 M	54.2 M	62.1 M	79.9 M	89.5 M
Manganese	<0.13 mg/kg	TM181		5460 M	12000 M	12600 M	271 M	11300 M	9550 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 M	<1 M	<0.1 M	<1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		28.5 M	19.3 M	13.3 M	9.02 M	22.8 M	20.3 M
Selenium	<1 mg/kg	TM181		<10 #	3.36 #	<10 #	<1 #	<10 #	1.35 #
Vanadium	<0.2 mg/kg	TM181		164 #	385 #	380 #	11.2 #	252 #	156 #
Zinc	<1.9 mg/kg	TM181		400 M	278 M	141 M	58 M	225 M	444 M

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref. W300-4
			Depth (m) 0.20 - 0.20
			Sample Type Soil/Solid (S)
			Date Sampled 11/02/2021
			Sample Time .
			Date Received 12/02/2021
			SDG Ref 210212-101
			Lab Sample No.(s) 23716459
			AGS Reference
Moisture Content Ratio (% of as received sample)	%	PM024	15
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 M
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	0.0234 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132	2.78 #
pH	1 pH Units	TM133	8.97 M
Cyanide, Total	<1 mg/kg	TM153	<1 M
Arsenic	<0.6 mg/kg	TM181	10.5 M
Cadmium	<0.02 mg/kg	TM181	1.64 M
Chromium	<0.9 mg/kg	TM181	100 M
Copper	<1.4 mg/kg	TM181	17.7 M
Iron	<1000 mg/kg	TM181	174000 #
Lead	<0.7 mg/kg	TM181	66.4 M
Manganese	<0.13 mg/kg	TM181	7920 M
Mercury	<0.1 mg/kg	TM181	<0.1 M
Nickel	<0.2 mg/kg	TM181	17.1 M
Selenium	<1 mg/kg	TM181	<1 #
Vanadium	<0.2 mg/kg	TM181	147 #
Zinc	<1.9 mg/kg	TM181	344 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.9	93.2	92.9	93.7	93.8	98.2
Acenaphthene-d10 % recovery**	%	TM218		97.5	93.2	90.9	93.7	93	97.7
Phenanthrene-d10 % recovery**	%	TM218		100	86.9	85.6	92.6	89	101
Chrysene-d12 % recovery**	%	TM218		82.8	85.8	87.5	90.3	88.1	89.8
Perylene-d12 % recovery**	%	TM218		81.1	84.3	90.8	88.2	92	87.5
Naphthalene	<9 µg/kg	TM218		41.3 M	184 M	<9 M	409 M	56.4 M	1300 M
Acenaphthylene	<12 µg/kg	TM218		20 M	78.3 M	<12 M	213 M	<12 M	933 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	24.9 M	17 M	157 M
Fluorene	<10 µg/kg	TM218		<10 M	44.4 M	<10 M	153 M	23.2 M	1270 M
Phenanthrene	<15 µg/kg	TM218		67.2 M	262 M	<15 M	990 M	178 M	7770 M
Anthracene	<16 µg/kg	TM218		<16 M	73.9 M	<16 M	273 M	37.3 M	1610 M
Fluoranthene	<17 µg/kg	TM218		171 M	466 M	<17 M	1680 M	248 M	10200 M
Pyrene	<15 µg/kg	TM218		122 M	342 M	<15 M	1230 M	211 M	7290 M
Benz(a)anthracene	<14 µg/kg	TM218		74.6 M	256 M	<14 M	713 M	115 M	3450 M
Chrysene	<10 µg/kg	TM218		67.6 M	217 M	<10 M	552 M	102 M	2800 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		94.4 M	381 M	<15 M	973 M	161 M	4780 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		29.2 M	135 M	<14 M	324 M	53.3 M	1470 M
Benzo(a)pyrene	<15 µg/kg	TM218		58.5 M	238 M	<15 M	581 M	108 M	2850 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		47.1 M	215 M	<18 M	449 M	79.5 M	2320 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	34.6 M	<23 M	71.4 M	<23 M	471 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		40.3 M	180 M	<24 M	367 M	70.4 M	1980 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		834	3110	<118	9000	1460	50600

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.5	93.1	91.7	91.4	93.1	95.8
Acenaphthene-d10 % recovery**	%	TM218		98.3	88.1	91.2	87.1	98	92.2
Phenanthrene-d10 % recovery**	%	TM218		103	85.6	87.9	87.3	95.3	88
Chrysene-d12 % recovery**	%	TM218		87	82.7	88.4	89.7	83.5	75.6
Perylene-d12 % recovery**	%	TM218		85.2	77.7	83	88.6	77.9	70.2
Naphthalene	<9 µg/kg	TM218		215 M	181 M	160 M	304 M	431 M	<180 M
Acenaphthylene	<12 µg/kg	TM218		117 M	137 M	215 M	265 M	277 M	<240 M
Acenaphthene	<8 µg/kg	TM218		22.8 M	230 M	121 M	334 M	21.1 M	<160 M
Fluorene	<10 µg/kg	TM218		82.6 M	212 M	236 M	439 M	198 M	<200 M
Phenanthrene	<15 µg/kg	TM218		637 M	1740 M	1800 M	2920 M	1940 M	989 M
Anthracene	<16 µg/kg	TM218		185 M	452 M	1110 M	808 M	478 M	<320 M
Fluoranthene	<17 µg/kg	TM218		1310 M	4590 M	12700 M	5250 M	3700 M	1980 M
Pyrene	<15 µg/kg	TM218		966 M	3610 M	10400 M	3730 M	2580 M	1510 M
Benz(a)anthracene	<14 µg/kg	TM218		520 M	2580 M	9050 M	2900 M	1100 M	1120 M
Chrysene	<10 µg/kg	TM218		426 M	2410 M	9160 M	2600 M	982 M	1110 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		747 M	3850 M	12300 M	4250 M	1400 M	1850 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		245 M	1480 M	4190 M	1270 M	476 M	606 M
Benzo(a)pyrene	<15 µg/kg	TM218		448 M	2310 M	7010 M	2440 M	779 M	954 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		339 M	1730 M	4940 M	1930 M	690 M	792 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		74.8 M	337 M	1050 M	362 M	124 M	<460 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		303 M	1450 M	3810 M	1570 M	581 M	686 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6640	27300	78200	31400	15800	11600

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.3	101	95.2	94.6	96.2	91.6
Acenaphthene-d10 % recovery**	%	TM218		89.3	103	98.4	92.3	97.3	91.5
Phenanthrene-d10 % recovery**	%	TM218		85.7	103	102	87.9	102	91.6
Chrysene-d12 % recovery**	%	TM218		84.2	83.1	81.3	85.9	83.6	99.5
Perylene-d12 % recovery**	%	TM218		80.2	79.7	75.5	83.7	80.9	100
Naphthalene	<9 µg/kg	TM218		248 M	307 M	8430 M	102 M	63.7 M	129 M
Acenaphthylene	<12 µg/kg	TM218		195 M	201 M	1290 M	58.9 M	35.5 M	52.2 M
Acenaphthene	<8 µg/kg	TM218		99.7 M	<80 M	268 M	19.9 M	29.6 M	14.9 M
Fluorene	<10 µg/kg	TM218		141 M	125 M	838 M	59.2 M	27.6 M	33.6 M
Phenanthrene	<15 µg/kg	TM218		1090 M	990 M	5740 M	476 M	372 M	298 M
Anthracene	<16 µg/kg	TM218		314 M	289 M	1810 M	121 M	105 M	78.6 M
Fluoranthene	<17 µg/kg	TM218		2660 M	2600 M	8490 M	662 M	794 M	513 M
Pyrene	<15 µg/kg	TM218		2040 M	1970 M	6290 M	489 M	665 M	398 M
Benz(a)anthracene	<14 µg/kg	TM218		1660 M	1360 M	3520 M	338 M	430 M	315 M
Chrysene	<10 µg/kg	TM218		1510 M	1440 M	3580 M	299 M	451 M	276 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2670 M	2260 M	4870 M	514 M	723 M	489 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		961 M	772 M	1600 M	188 M	250 M	154 M
Benzo(a)pyrene	<15 µg/kg	TM218		1640 M	1270 M	3220 M	318 M	439 M	284 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1340 M	1090 M	2530 M	275 M	359 M	233 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		230 M	276 M	549 M	43.9 M	78.1 M	41.6 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1140 M	990 M	2310 M	262 M	370 M	214 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		17900	15900	55300	4230	5190	3520

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Customer Sample Ref.	W300-4
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	11/02/2021
Sample Time	.
Date Received	12/02/2021
SDG Ref	210212-101
Lab Sample No.(s)	23716459
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	94.6
Acenaphthene-d10 % recovery**	%	TM218	91.7
Phenanthrene-d10 % recovery**	%	TM218	83.8
Chrysene-d12 % recovery**	%	TM218	82.2
Perylene-d12 % recovery**	%	TM218	81.5
Naphthalene	<9 µg/kg	TM218	167 M
Acenaphthylene	<12 µg/kg	TM218	71 M
Acenaphthene	<8 µg/kg	TM218	23.3 M
Fluorene	<10 µg/kg	TM218	44.4 M
Phenanthrene	<15 µg/kg	TM218	459 M
Anthracene	<16 µg/kg	TM218	98.9 M
Fluoranthene	<17 µg/kg	TM218	744 M
Pyrene	<15 µg/kg	TM218	571 M
Benz(a)anthracene	<14 µg/kg	TM218	399 M
Chrysene	<10 µg/kg	TM218	433 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	730 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	210 M
Benzo(a)pyrene	<15 µg/kg	TM218	433 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	346 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	73.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	327 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	5130

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74.1	125	70.9	90	79	82.8
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3770	1090
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	4780	<1000	2370	11000	5670
Aliphatics >C21-C35	<1000 µg/kg	TM414		2020	19700	1560	14100	30800	20700
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	3390	<1000	2560	6470	3760
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	28100	<5000	19000	52000	31300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		10900	49800	<10000	55500	86200	109000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1090
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1670
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	2090	<1000	5920	2750	14300
Aromatics > EC21-EC35	<1000 µg/kg	TM414		7860	17600	1360	24500	27500	54000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1860	<1000	5150	3280	6340
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1020
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		8860	21800	<5000	36500	34200	77400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	49800	<10000	55500	86200	109000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		84	80.5	88.3	86.9	34 4	82.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3270	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	11300	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1480	1150	3670	1620	50500	1730
Aliphatics >C21-C35	<1000 µg/kg	TM414		3920	4520	10700	11700	2660000	6160
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	2070	319000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		5400	6440	14900	15700	3040000	8340
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		29500	147000	68000	69500	3090000	204000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1970	<1000	<1000	4440	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6920	20100	4800	7800	15300	7290
Aromatics > EC21-EC35	<1000 µg/kg	TM414		15600	108000	35700	40200	24800	183000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	10200	12400	4940	<1000	5270
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1870	3820	1170	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		24100	141000	53200	53800	46200	196000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		29500	147000	68000	69500	3090000	204000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		101	70.3	20 4	107	112	94.5
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	3160	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1410	1160	17300	<1000	6060	1560
Aliphatics >C21-C35	<1000 µg/kg	TM414		10500	8800	42200	23300	54500	24300
Aliphatics >C35-C44	<1000 µg/kg	TM414		1140	<1000	12000	5000	18500	6460
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		13300	10600	74900	29100	79500	32500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		85900	62500	228000	36900	99200	47000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	9950	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1230	6320	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		10700	9350	33400	<1000	1810	1310
Aromatics > EC21-EC35	<1000 µg/kg	TM414		55000	38100	93200	5460	16100	11300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		6290	2870	10400	1430	1770	1670
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1270	<1000	1690	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		72600	51800	153000	7860	19800	14400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		85900	62500	228000	36900	99200	47000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W300-4
			Depth (m)	0.20 - 0.20
			Sample Type	Soil/Solid (S)
			Date Sampled	11/02/2021
			Sample Time	.
			Date Received	12/02/2021
			SDG Ref	210212-101
			Lab Sample No.(s)	23716459
			AGS Reference	
GRO Surrogate % recovery**	%	TM089		80.1
Aliphatics >C5-C6	<10 µg/kg	TM089		<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1480
Aliphatics >C21-C35	<1000 µg/kg	TM414		21400
Aliphatics >C35-C44	<1000 µg/kg	TM414		4470
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		27400
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		80700
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1810
Aromatics > EC16-EC21	<1000 µg/kg	TM414		20300
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28800
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2210
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		53300
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		80700
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50
GRO >C5-C10	<20 µg/kg	TM089		<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	107	112	106	106	107
Toluene-d8**	%	TM116		95.6	95.7	94.4	97.8	97.9	98.1
4-Bromofluorobenzene**	%	TM116		88.7	90	87.3	94	93.9	96.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	106	105	99.5	108
Toluene-d8**	%	TM116		98.3	96.6	97.3	96.3	91.2	96.9
4-Bromofluorobenzene**	%	TM116		97.4	90.9	93.9	92	81.3	92.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
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aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	106	90.8	105	105	106
Toluene-d8**	%	TM116		97.3	98	91.5	97.5	97.4	98.8
4-Bromofluorobenzene**	%	TM116		91	95.1	77.8	93.7	94	96.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	1770 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W300-4
			Depth (m)	0.20 - 0.20
			Sample Type	Soil/Solid (S)
			Date Sampled	11/02/2021
			Sample Time	.
			Date Received	12/02/2021
			SDG Ref	210212-101
			Lab Sample No.(s)	23716459
			AGS Reference	
Dibromofluoromethane**	%	TM116		108
Toluene-d8**	%	TM116		96.5
4-Bromofluorobenzene**	%	TM116		93.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M
Benzene	<9 µg/kg	TM116		<180 M
Toluene	<7 µg/kg	TM116		<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #
o-Xylene	<10 µg/kg	TM116		<200 M
Naphthalene	<13 µg/kg	TM116		<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4
Sum of BTEX	<40 µg/kg	TM116		<800

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLA-2 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716430 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLA-4 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716443 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLP-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716403 TM048	18/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLP-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716417 TM048	18/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716468 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716480 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-5 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716489 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-7 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716392 TM048	18/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W300-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716382 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W300-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716453 TM048	18/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23716424	23716430	23716436	23716443	23716403	23716409	23716417	23716468	23716473	23716480
Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2	SPLP-3	W213-1	W213-2	W213-3
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Asbestos ID in Solid Samples		23-Feb-2021		23-Feb-2021	18-Feb-2021		18-Feb-2021	22-Feb-2021		23-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	18-Feb-2021	16-Feb-2021	18-Feb-2021	17-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	17-Feb-2021
EPH CWG GC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
GRO by GC-FID (S)	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Metals in solid samples by OES	20-Feb-2021	20-Feb-2021	20-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	20-Feb-2021	20-Feb-2021
PAH by GCMS	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
pH	16-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021	17-Feb-2021	16-Feb-2021	16-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021
Phenols by HPLC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Sample description	13-Feb-2021	14-Feb-2021	14-Feb-2021	14-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021	14-Feb-2021
Total Organic Carbon	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
TPH CWG GC (S)	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
VOC MS (S)	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021

Lab Sample No(s)	23716485	23716489	23716387	23716392	23716399	23716382	23716449	23716453	23716459
Customer Sample Ref.	W213-4	W213-5	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3	W300-4
AGS Ref.									
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021
Asbestos ID in Solid Samples		22-Feb-2021		18-Feb-2021		22-Feb-2021		18-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	16-Feb-2021	18-Feb-2021	16-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	16-Feb-2021
EPH CWG GC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
GRO by GC-FID (S)	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Metals in solid samples by OES	20-Feb-2021	20-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	19-Feb-2021	20-Feb-2021	22-Feb-2021	22-Feb-2021
PAH by GCMS	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	22-Feb-2021	18-Feb-2021	22-Feb-2021	18-Feb-2021	19-Feb-2021
pH	16-Feb-2021	17-Feb-2021	15-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021	15-Feb-2021	17-Feb-2021	16-Feb-2021
Phenols by HPLC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021
Sample description	13-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	14-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021
Total Organic Carbon	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
TPH CWG GC (S)	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
VOC MS (S)	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021

Appendix

General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: hawardencustomerservices@alsglobal.com
Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	01 March 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210216-60
Your Reference:	P18-669
Location:	Llanwern
Report No:	588744

This report has been revised and directly supersedes 588425 in its entirety.

We received 24 samples on Tuesday February 16, 2021 and 24 of these samples were scheduled for analysis which was completed on Monday March 01, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23732928	SPIX-1		0.20 - 0.20	15/02/2021
23732934	SPIX-2		0.20 - 0.20	15/02/2021
23732940	SPIX-3		0.20 - 0.20	15/02/2021
23732922	W104-1		0.20 - 0.20	15/02/2021
23732766	W125-1		0.20 - 0.20	15/02/2021
23732878	W125-2		0.20 - 0.20	15/02/2021
23732945	W204-1		0.20 - 0.20	15/02/2021
23732951	W204-2		0.20 - 0.20	15/02/2021
23732960	W204-3		0.20 - 0.20	15/02/2021
23732779	W204-4		0.20 - 0.20	15/02/2021
23732793	W204-5		0.20 - 0.20	15/02/2021
23732810	W204-6		0.20 - 0.20	15/02/2021
23732822	W204-7		0.20 - 0.20	15/02/2021
23732828	W204-8		0.20 - 0.20	15/02/2021
23732837	W204-9		0.20 - 0.20	15/02/2021
23732845	W204-10		0.20 - 0.20	15/02/2021
23732852	W204-11		0.20 - 0.20	15/02/2021
23732863	W204-12		0.20 - 0.20	15/02/2021
23732870	W204-13		0.20 - 0.20	15/02/2021
23732887	W204-14		0.20 - 0.20	15/02/2021
23732892	W204-15		0.20 - 0.20	15/02/2021
23732898	W204-16		0.20 - 0.20	15/02/2021
23732908	W204-17		0.20 - 0.20	15/02/2021
23732914	W204-18		0.20 - 0.20	15/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23732928		23732934		23732940		23732922		23732766		23732878		23732945		23732951				
Customer Sample Reference			SPIX-1		SPIX-2		SPIX-3		W104-1		W125-1		W125-2		W204-1		W204-2				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X					X			X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24		X			X		X			X			X		X				X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
pH	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 24		X			X		X			X			X		X				X	

23732845	W204-10		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732837	W204-9		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732828	W204-8		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732822	W204-7		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732810	W204-6		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732793	W204-5		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732779	W204-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732960	W204-3		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23732951	W204-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23732852		23732863		23732870		23732887		23732892		23732898		23732908		23732914			
Customer Sample Reference			W204-11		W204-12		W204-13		W204-14		W204-15		W204-16		W204-17		W204-18			
AGS Reference																				
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20			
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	X					X				X					X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24			X		X			X	X			X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
pH	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Sample description	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 24			X		X			X	X			X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23732928	SPIX-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732934	SPIX-2	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23732940	SPIX-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732922	W104-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732766	W125-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732878	W125-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732945	W204-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732951	W204-2	0.20 - 0.20	Dark Brown	Sand	None	Stones
23732960	W204-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732779	W204-4	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23732793	W204-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732810	W204-6	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732822	W204-7	0.20 - 0.20	Dark Brown	Sandy Silt Loam	None	Stones
23732828	W204-8	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732837	W204-9	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732845	W204-10	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732852	W204-11	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732863	W204-12	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732870	W204-13	0.20 - 0.20	Dark Brown	Sand	None	Stones
23732887	W204-14	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23732892	W204-15	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732898	W204-16	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23732908	W204-17	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732914	W204-18	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	18	19	13	14	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0123 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.72 #	3.55 #	4.26 #	8.22 #	2.26 #	8.95 #
pH	1 pH Units	TM133		8.57 M	8.73 M	8.74 M	8.65 M	9.96 M	9.75 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		25.3 M	10.6 M	11.9 M	11.3 M	5.08 M	8.01 M
Cadmium	<0.02 mg/kg	TM181		0.623 M	<0.2 M	0.33 M	<0.02 M	<0.02 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		55.6 M	78.3 M	48.5 M	159 M	238 M	214 M
Copper	<1.4 mg/kg	TM181		14.3 M	15.2 M	16.5 M	24.7 M	21.5 M	23 M
Iron	<1000 mg/kg	TM181		54000 #	54300 #	45400 #	80600 #	142000 #	108000 #
Lead	<0.7 mg/kg	TM181		34.5 M	56.8 M	55.3 M	98.3 M	29.3 M	56.1 M
Manganese	<0.13 mg/kg	TM181		4950 M	3420 M	2520 M	12400 M	17500 M	15500 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<1 M	<1 M	<0.1 M	<0.1 M	<1 M
Nickel	<0.2 mg/kg	TM181		19.4 M	24.6 M	23.9 M	20 M	6.22 M	14.2 M
Selenium	<1 mg/kg	TM181		1.64 #	<10 #	<10 #	5.69 #	3 #	<10 #
Vanadium	<0.2 mg/kg	TM181		91.1 #	111 #	56 #	354 #	248 #	254 #
Zinc	<1.9 mg/kg	TM181		164 M	176 M	208 M	354 M	171 M	180 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	15	14	18	12	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0114 M	0.0118 M	<0.01 M	<0.01 M	<0.01 M	0.0113 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0228 M	0.0354 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	0.0236 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	0.0708 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		30.5 #	38.3 #	3.09 #	4.88 #	62.2 #	62.8 #
pH	1 pH Units	TM133		11.4 M	11.4 M	9.21 M	9.11 M	11.9 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	2.93 M	2.47 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		5.29 M	6.5 M	12.1 M	8.93 M	2.08 M	1.67 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.1 M	0.889 M	3.72 M	<0.02 M	0.512 M
Chromium	<0.9 mg/kg	TM181		232 M	332 M	126 M	156 M	310 M	304 M
Copper	<1.4 mg/kg	TM181		17.9 M	17 M	22.7 M	21 M	9.9 M	7.53 M
Iron	<1000 mg/kg	TM181		117000 #	107000 #	133000 #	125000 #	130000 #	92300 #
Lead	<0.7 mg/kg	TM181		42.5 M	253 M	283 M	393 M	<0.7 M	1.66 M
Manganese	<0.13 mg/kg	TM181		17300 M	15300 M	17000 M	12600 M	24900 M	16200 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	0.207 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		9.57 M	27.9 M	20.1 M	13.9 M	2.89 M	3.66 M
Selenium	<1 mg/kg	TM181		3.75 #	3.83 #	4.94 #	3.94 #	4.96 #	5.97 #
Vanadium	<0.2 mg/kg	TM181		248 #	326 #	490 #	662 #	233 #	228 #
Zinc	<1.9 mg/kg	TM181		189 M	248 M	1310 M	1580 M	48.3 M	48.1 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304				0.01 #			
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304				0.006 #			
Additional Asbestos Components (Using TM048)		TM304				Additional componen #			
Analysts Comments		TM304				Fibre bundles in soil.			
Asbestos Quantification - Total - %	<0.001 %	TM304				0.016 #			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	14	15	14	13	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0115 M	0.0234 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0115 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	0.0117 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.506 M	<0.015 M	<0.015 M	0.269 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.529 M	<0.035 M	<0.035 M	0.269 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49 #	38.1 #	52.9 #	47.6 #	26.5 #	18.4 #
pH	1 pH Units	TM133		11.3 M	11.6 M	11 M	11 M	10 M	9.39 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.82 M	6.06 M	7.16 M	5.69 M	4.45 M	4.86 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.81 M	<0.02 M	0.946 M	<0.02 M	0.847 M
Chromium	<0.9 mg/kg	TM181		269 M	198 M	219 M	237 M	196 M	392 M
Copper	<1.4 mg/kg	TM181		18.1 M	18.2 M	23.1 M	14.7 M	13.8 M	11 M
Iron	<1000 mg/kg	TM181		107000 #	120000 #	102000 #	90400 #	84900 #	149000 #
Lead	<0.7 mg/kg	TM181		39.8 M	34.5 M	49.8 M	66.5 M	32.8 M	40 M
Manganese	<0.13 mg/kg	TM181		23300 M	12500 M	17200 M	13400 M	12200 M	21900 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		10.9 M	10.3 M	13.2 M	8.17 M	10.5 M	4.57 M
Selenium	<1 mg/kg	TM181		6.56 #	3.35 #	4.16 #	5.48 #	3.21 #	5.44 #
Vanadium	<0.2 mg/kg	TM181		259 #	316 #	252 #	204 #	175 #	404 #
Zinc	<1.9 mg/kg	TM181		174 M	174 M	213 M	260 M	141 M	122 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	16	14	16	12	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0119 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0116 M	0.012 M	0.0342 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.789 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.789 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.98 #	24.3 #	41.4 #	41 #	6.43 #	11.4 #
pH	1 pH Units	TM133		11.1 M	11.1 M	9.59 M	10.4 M	11.1 M	11.4 M
Cyanide, Total	<1 mg/kg	TM153		1.29 M	1.17 M	<1 M	<1 M	2.53 M	2.19 M
Arsenic	<0.6 mg/kg	TM181		8.09 M	9.95 M	6.73 M	6.29 M	15 M	13.1 M
Cadmium	<0.02 mg/kg	TM181		0.465 M	0.329 M	<0.02 M	0.727 M	1.86 M	4.03 M
Chromium	<0.9 mg/kg	TM181		132 M	96.4 M	226 M	286 M	213 M	93.2 M
Copper	<1.4 mg/kg	TM181		15.1 M	18.5 M	15 M	14.4 M	22.1 M	23 M
Iron	<1000 mg/kg	TM181		119000 #	136000 #	84800 #	83300 #	209000 #	231000 #
Lead	<0.7 mg/kg	TM181		255 M	381 M	48.5 M	36.3 M	486 M	1050 M
Manganese	<0.13 mg/kg	TM181		13000 M	13700 M	12600 M	14600 M	24300 M	18300 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<1 M	0.437 M
Nickel	<0.2 mg/kg	TM181		9.94 M	12.3 M	11.4 M	8.48 M	23.3 M	11.4 M
Selenium	<1 mg/kg	TM181		2.59 #	1.9 #	5.26 #	6.36 #	10.2 #	<1 #
Vanadium	<0.2 mg/kg	TM181		671 #	364 #	202 #	327 #	1180 #	857 #
Zinc	<1.9 mg/kg	TM181		901 M	1250 M	170 M	162 M	1100 M	2360 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.1	92.1	94.8	96.2	96.8	96.4
Acenaphthene-d10 % recovery**	%	TM218		95.8	92.5	93.7	92.5	97.7	94.8
Phenanthrene-d10 % recovery**	%	TM218		97.6	93.3	95.1	95.7	97.9	97.3
Chrysene-d12 % recovery**	%	TM218		86	77.3	79.9	90.2	82	83.8
Perylene-d12 % recovery**	%	TM218		86.4	71.6	73.9	80.4	79.8	78.4
Naphthalene	<9 µg/kg	TM218		90.9 M	77.2 M	75.1 M	24.2 M	23 M	523 M
Acenaphthylene	<12 µg/kg	TM218		55.8 M	43.4 M	49.7 M	<12 M	<12 M	746 M
Acenaphthene	<8 µg/kg	TM218		21.6 M	13.9 M	16.5 M	21.4 M	29.5 M	42.5 M
Fluorene	<10 µg/kg	TM218		48.1 M	29.1 M	30.8 M	16.3 M	12.1 M	141 M
Phenanthrene	<15 µg/kg	TM218		401 M	278 M	289 M	184 M	199 M	1820 M
Anthracene	<16 µg/kg	TM218		97.6 M	76.8 M	94.8 M	40.7 M	49.4 M	1090 M
Fluoranthene	<17 µg/kg	TM218		699 M	591 M	684 M	289 M	696 M	6380 M
Pyrene	<15 µg/kg	TM218		526 M	458 M	518 M	279 M	733 M	5060 M
Benz(a)anthracene	<14 µg/kg	TM218		312 M	268 M	322 M	165 M	568 M	2940 M
Chrysene	<10 µg/kg	TM218		283 M	250 M	297 M	151 M	590 M	3140 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		492 M	370 M	425 M	238 M	1160 M	4850 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		150 M	116 M	142 M	74.7 M	401 M	1570 M
Benzo(a)pyrene	<15 µg/kg	TM218		283 M	222 M	268 M	178 M	839 M	3220 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		285 M	195 M	252 M	169 M	743 M	2700 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		43.1 M	40.5 M	49.3 M	<23 M	111 M	513 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		218 M	180 M	211 M	157 M	662 M	2390 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4010	3210	3720	1990	6810	37100

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.3	96.5	95.7	97.5	93.1	95.5
Acenaphthene-d10 % recovery**	%	TM218		99.1	97.8	94.9	96.5	90.8	96.7
Phenanthrene-d10 % recovery**	%	TM218		94.8	97.4	97.5	97.9	91.4	92.9
Chrysene-d12 % recovery**	%	TM218		77.9	84.8	83.3	83.3	81.5	75.6
Perylene-d12 % recovery**	%	TM218		77.5	83.2	74.1	84	70.3	68.8
Naphthalene	<9 µg/kg	TM218		11900 M	5890 M	237 M	206 M	3580 M	2630 M
Acenaphthylene	<12 µg/kg	TM218		4510 M	1760 M	21.9 M	20.2 M	816 M	820 M
Acenaphthene	<8 µg/kg	TM218		280 M	151 M	20.1 M	24.5 M	65.2 M	61.6 M
Fluorene	<10 µg/kg	TM218		4750 M	1140 M	34.9 M	32.8 M	479 M	614 M
Phenanthrene	<15 µg/kg	TM218		29300 M	8110 M	276 M	255 M	4270 M	6050 M
Anthracene	<16 µg/kg	TM218		10000 M	2130 M	78.5 M	104 M	1000 M	2170 M
Fluoranthene	<17 µg/kg	TM218		31500 M	9520 M	561 M	539 M	5940 M	8380 M
Pyrene	<15 µg/kg	TM218		21200 M	6430 M	561 M	531 M	4210 M	5910 M
Benz(a)anthracene	<14 µg/kg	TM218		9910 M	3310 M	328 M	314 M	2100 M	2600 M
Chrysene	<10 µg/kg	TM218		8260 M	2690 M	349 M	348 M	2030 M	2170 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		11100 M	4300 M	572 M	552 M	2440 M	2930 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		4220 M	1340 M	176 M	177 M	759 M	924 M
Benzo(a)pyrene	<15 µg/kg	TM218		7240 M	2550 M	358 M	346 M	1430 M	1930 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		6530 M	2450 M	305 M	308 M	1170 M	1430 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		993 M	414 M	62.2 M	43.7 M	232 M	236 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4360 M	1690 M	279 M	257 M	867 M	1030 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		166000	53900	4220	4060	31400	39900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.9	96.1	94.8	97.7	93.1	94.1
Acenaphthene-d10 % recovery**	%	TM218		97.2	92.6	95.4	97.4	85.4	91.9
Phenanthrene-d10 % recovery**	%	TM218		94.9	93.8	92.9	98.4	87.2	95.1
Chrysene-d12 % recovery**	%	TM218		78.2	92.7	76.4	80.4	78.2	79.1
Perylene-d12 % recovery**	%	TM218		77	85.1	72.9	70.3	73.3	70.8
Naphthalene	<9 µg/kg	TM218		8470 M	6180 M	2620 M	2770 M	3670 M	3020 M
Acenaphthylene	<12 µg/kg	TM218		2550 M	2210 M	884 M	1040 M	1170 M	864 M
Acenaphthene	<8 µg/kg	TM218		232 M	163 M	76.2 M	96.1 M	65.2 M	60.3 M
Fluorene	<10 µg/kg	TM218		1680 M	1590 M	445 M	614 M	708 M	480 M
Phenanthrene	<15 µg/kg	TM218		12200 M	11000 M	4220 M	5880 M	7670 M	5130 M
Anthracene	<16 µg/kg	TM218		3530 M	3350 M	1330 M	1700 M	2230 M	1370 M
Fluoranthene	<17 µg/kg	TM218		17200 M	16700 M	7540 M	9410 M	9610 M	6770 M
Pyrene	<15 µg/kg	TM218		12400 M	11900 M	5360 M	6660 M	6780 M	4770 M
Benz(a)anthracene	<14 µg/kg	TM218		6240 M	6200 M	2760 M	3210 M	3340 M	2270 M
Chrysene	<10 µg/kg	TM218		5260 M	4760 M	2490 M	2710 M	2850 M	1920 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		7940 M	7670 M	3550 M	3950 M	4090 M	2620 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		2650 M	2290 M	1050 M	1240 M	1430 M	836 M
Benzo(a)pyrene	<15 µg/kg	TM218		4750 M	4490 M	2070 M	2280 M	2570 M	1590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		4300 M	3770 M	1840 M	1950 M	2260 M	1340 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		682 M	728 M	311 M	373 M	415 M	253 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2970 M	2820 M	1310 M	1490 M	1680 M	1010 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		93000	85900	37800	45400	50500	34300

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.7	99.2	94.7	96.1	90	88.5
Acenaphthene-d10 % recovery**	%	TM218		96.6	98.1	93.4	97.1	89.8	90.5
Phenanthrene-d10 % recovery**	%	TM218		97.8	99.9	94.3	94.6	88	89
Chrysene-d12 % recovery**	%	TM218		82.1	81	78.2	78.4	75.6	93.5
Perylene-d12 % recovery**	%	TM218		80	74.5	70.6	76.2	76.6	83
Naphthalene	<9 µg/kg	TM218		2910 M	4580 M	1860 M	2680 M	4350 M	7170 M
Acenaphthylene	<12 µg/kg	TM218		625 M	1330 M	663 M	864 M	9020 M	32300 M
Acenaphthene	<8 µg/kg	TM218		134 M	159 M	69.7 M	101 M	685 M	2030 M
Fluorene	<10 µg/kg	TM218		575 M	1580 M	424 M	551 M	19700 M	53000 M
Phenanthrene	<15 µg/kg	TM218		4360 M	8820 M	3890 M	4790 M	89500 M	226000 M
Anthracene	<16 µg/kg	TM218		1150 M	5230 M	839 M	1180 M	42700 M	86000 M
Fluoranthene	<17 µg/kg	TM218		7080 M	13900 M	5480 M	6750 M	111000 M	331000 M
Pyrene	<15 µg/kg	TM218		5150 M	9440 M	4010 M	4840 M	69100 M	204000 M
Benz(a)anthracene	<14 µg/kg	TM218		2600 M	4930 M	1900 M	2450 M	34900 M	109000 M
Chrysene	<10 µg/kg	TM218		2360 M	4270 M	1610 M	2020 M	34600 M	84600 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		3650 M	6310 M	2540 M	3310 M	39800 M	121000 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1060 M	1590 M	855 M	1040 M	13600 M	36500 M
Benzo(a)pyrene	<15 µg/kg	TM218		2180 M	3210 M	1580 M	1920 M	24400 M	71900 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2040 M	2570 M	1230 M	1820 M	18600 M	56700 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		296 M	588 M	273 M	296 M	4280 M	12000 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1470 M	2000 M	967 M	1270 M	13000 M	39700 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		37600	70500	28200	35900	529000	1470000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99	89	79	85	99	84
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1070	1680
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	7790	5700	12900
Aliphatics >C21-C35	<1000 µg/kg	TM414		8720	<1000	8800	7680	12400	26800
Aliphatics >C35-C44	<1000 µg/kg	TM414		1700	<1000	5710	<1000	1400	4230
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11100	<5000	14900	15900	20500	45600
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		22300	<10000	29100	99300	64800	147000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1190
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1150	<1000	1400	7590	3830	14200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		8880	2860	11400	57300	36900	76900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	1280	18600	3410	8360
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	2110	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		11200	<5000	14200	83400	44300	101000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		22300	<10000	29100	99300	64800	147000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		22.6 4	32.3 4	95.9	115	8.2	10.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	10.2 4
Aliphatics >C6-C8	<10 µg/kg	TM089		16 4	34.2 4	<10	<10	23.9	50.9 4
Aliphatics >C8-C10	<10 µg/kg	TM089		16 4	35.4 4	17.4	<10	22.8	42.9 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3340	2170
Aliphatics >C12-C16	<1000 µg/kg	TM414		5500	2730	<1000	<1000	7370	5750
Aliphatics >C16-C21	<1000 µg/kg	TM414		32400	12500	18700	19300	10100	19300
Aliphatics >C21-C35	<1000 µg/kg	TM414		54600	29900	66000	56400	69900	106000
Aliphatics >C35-C44	<1000 µg/kg	TM414		9230	4600	17300	6900	5120	6240
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		102000	50000	103000	83400	95800	140000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		449000	281000	131000	123000	174000	652000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		11.4 4	23.6 4	11.6	<10	14.8	29.4 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		12600	10600	<1000	<1000	4400	4560
Aromatics > EC12-EC16	<1000 µg/kg	TM414		18700	13500	<1000	<1000	9740	37300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		109000	78200	2200	3010	23600	202000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		185000	116000	23700	34000	39500	246000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		20700	12400	<1000	2130	1040	22200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1400	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		347000	231000	27500	39500	78300	512000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		449000	281000	131000	123000	174000	652000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	69.6 4	<50	<50	<50	104 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	69.6 4	<20	<20	<20	104 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		25.5 4	47.3 4	12.6 4	14 4	18.6 4	14.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		35.7 4	<10 4	26.9 4	18.7 4	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		44.9 4	10.5 4	25.7 4	16.4 4	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	2300	1470	1790	1720
Aliphatics >C12-C16	<1000 µg/kg	TM414		3540	4790	5490	3710	5170	5520
Aliphatics >C16-C21	<1000 µg/kg	TM414		15700	37900	10700	9390	6810	8370
Aliphatics >C21-C35	<1000 µg/kg	TM414		28600	44100	36200	29600	25200	44200
Aliphatics >C35-C44	<1000 µg/kg	TM414		5740	10200	9550	5380	6010	32600
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		54100	97600	64300	49600	45000	92500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		271000	308000	165000	164000	207000	274000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		29.9 4	<10 4	17.6 4	11.7 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		7190	9060	3520	2920	4560	4850
Aromatics > EC12-EC16	<1000 µg/kg	TM414		12800	14000	7220	6270	8000	8300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		72200	66700	26000	30600	51900	52300
Aromatics > EC21-EC35	<1000 µg/kg	TM414		114000	111000	60700	69400	90600	109000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		10700	10000	3360	5630	6590	6940
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1260	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		217000	211000	101000	115000	162000	182000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		271000	308000	165000	164000	207000	274000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		80.5 4	<50 4	52.7 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		80.5 4	<20 4	52.7 4	<20 4	<20 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		79	85.3 2	24.7 4	18.5 4	94	106
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		12.8	34.5 2	<10 4	10.8 4	65	23.4
Aliphatics >C8-C10	<10 µg/kg	TM089		18.6	54.7 2	<10 4	14.4 4	73	36.3
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	1940	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	5610	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		4640	3250	3290	16200	20800	26800
Aliphatics >C21-C35	<1000 µg/kg	TM414		21800	12300	5980	41900	59300	49500
Aliphatics >C35-C44	<1000 µg/kg	TM414		3910	2680	<1000	17400	20700	16200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		30700	18600	10100	83000	101000	93300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		77200	118000	57200	245000	712000	1790000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		12.8	35.7 2	<10 4	<10 4	49	24.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2110	4550	1620	3870	5330	6370
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	3390	2220	9580	12800	51600
Aromatics > EC16-EC21	<1000 µg/kg	TM414		12500	33300	17400	53800	161000	550000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28900	54600	23600	89000	363000	942000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2060	3740	2240	6040	68800	150000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	10800	27700
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		46500	99600	47000	162000	611000	1700000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		77200	118000	57200	245000	712000	1790000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	89.3 2	<50 4	<50 4	138	59.7
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 2	<50 4	<50 4	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	89.3 2	<20 4	<20 4	138	59.7

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Dibromofluoromethane**	%	TM116		111	134	107	110	109	109
Toluene-d8**	%	TM116		99.9	99.4	98.2	98.3	99.8	98.7
4-Bromofluorobenzene**	%	TM116		94.7	97.7	91.9	92.6	95.7	97.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Dibromofluoromethane**	%	TM116		103	94.7	114	122	105	105
Toluene-d8**	%	TM116		92.1	95.1	105	100	97	95.1
4-Bromofluorobenzene**	%	TM116		76.3	77.4	104	97.9	102	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<2000 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<1800 M	<1800 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<1400 M	<1400 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<800 M	<800 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<2000 #	<2000 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<2000 M
Naphthalene	<13 µg/kg	TM116		1340 M	3560 M	<260 M	<260 M	<2600 M	3040 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<4	<4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<8000	<8000

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Dibromofluoromethane**	%	TM116		99.8	96.3	90.7	97.5	109	95.6
Toluene-d8**	%	TM116		94.1	93.7	90.5	91.3	96.3	91.7
4-Bromofluorobenzene**	%	TM116		77.8	72.8	73.9	73.5	98.1	76.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<1800 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<1400 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<800 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<2000 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<200 M
Naphthalene	<13 µg/kg	TM116		906 M	3240 M	974 M	679 M	<2600 M	729 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<8000	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Dibromofluoromethane**	%	TM116		107	106 2	109	98	107	107
Toluene-d8**	%	TM116		98.1	98.5 2	94.3	94.2	98.3	97.8
4-Bromofluorobenzene**	%	TM116		88.5	92 2	104	79.1	93.2	90.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 2 M	<2000 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 2 M	<1800 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 2 M	<1400 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 2 M	<800 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 2 #	<2000 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 2 M	<2000 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		2990 M	724 M	<2600 M	466 M	<260 M	862 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4 2	<4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800 2	<8000	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPIX-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732934 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W104-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732922 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W125-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732766 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732945 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-3 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732960 TM048	23/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-5 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732793 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-7 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732822 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-9 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732837 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-11 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732852 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-13 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732870 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-15 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732892 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-17 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732908 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	W204-3	Additional component of Chrysotile detected. (#)	Fibre bundles in soil.	0.0100 (#)	0.0060 (#)	0.016 (#)
Depth (m)	0.20 - 0.20					
Sample Type	SOLID					
Date Sampled	15/02/2021 00:00:00					
Date Received	16/02/2021 05:00:00					
SDG	210216-60					
Original Sample	23732960					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Test Completion Dates

Lab Sample No(s)	23732928	23732934	23732940	23732922	23732766	23732878	23732945	23732951	23732960	23732779
Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2	W204-1	W204-2	W204-3	W204-4
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples		23-Feb-2021		23-Feb-2021	23-Feb-2021		23-Feb-2021		23-Feb-2021	
Asbestos Quantification - Full									01-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Metals in solid samples by OES	23-Feb-2021	26-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	24-Feb-2021
PAH by GCMS	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	19-Feb-2021	23-Feb-2021	19-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
VOC MS (S)	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021

Lab Sample No(s)	23732793	23732810	23732822	23732828	23732837	23732845	23732852	23732863	23732870	23732887
Customer Sample Ref.	W204-5	W204-6	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12	W204-13	W204-14
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021		23-Feb-2021		23-Feb-2021		23-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	19-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	19-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	23-Feb-2021	21-Feb-2021	21-Feb-2021	23-Feb-2021

Lab Sample No(s)	23732892	23732898	23732908	23732914
Customer Sample Ref.	W204-15	W204-16	W204-17	W204-18
AGS Ref.				
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	23-Feb-2021	24-Feb-2021
PAH by GCMS	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	19-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021
VOC MS (S)	23-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Almondsbury
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BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	25 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210217-69
Your Reference:	P18-669
Location:	Llanwern
Report No:	588256

We received 13 samples on Wednesday February 17, 2021 and 13 of these samples were scheduled for analysis which was completed on Thursday February 25, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

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CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23740650	SPDL-1		0.20 - 0.20	15/02/2021
23740666	SPDL-2		0.20 - 0.20	15/02/2021
23740683	SPJB-1		0.20 - 0.20	15/02/2021
23740687	SPJB-2		0.20 - 0.20	15/02/2021
23740693	SPJB-3		0.20 - 0.20	15/02/2021
23740604	W106-1		0.20 - 0.20	15/02/2021
23740671	W177-1		0.20 - 0.20	15/02/2021
23740678	W177-2		0.20 - 0.20	15/02/2021
23740700	W191-1		0.20 - 0.20	15/02/2021
23740611	W192-1		0.20 - 0.20	15/02/2021
23740619	W192-2		0.20 - 0.20	15/02/2021
23740629	W204-19		0.20 - 0.20	15/02/2021
23740639	W204-20		0.20 - 0.20	15/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23740650		23740666		23740683		23740687		23740693		23740604		23740671		23740678	
Customer Sample Reference			SPDL-1		SPDL-2		SPJB-1		SPJB-2		SPJB-3		W106-1		W177-1		W177-2	
AGS Reference																		
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7			X					X					X					X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 13		X			X		X			X		X			X		X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
PAH by GCMS	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
pH	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Sample description	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Total Organic Carbon	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
VOC MS (S)	All	NDPs: 0 Tests: 13		X			X		X			X		X			X		X		

23740639	W204-20		0.20 - 0.20	60g VOC (ALE215)	S		
				250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
				60g VOC (ALE215)	S		X
23740629	W204-19		0.20 - 0.20	250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
				60g VOC (ALE215)	S		X
23740619	W192-2		0.20 - 0.20	250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
				60g VOC (ALE215)	S		X
23740611	W192-1		0.20 - 0.20	250g Amber Jar (ALE210)	S	X	
				60g VOC (ALE215)	S		X
23740700	W191-1		0.20 - 0.20	250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
				60g VOC (ALE215)	S		X
23740678	W177-2		0.20 - 0.20	250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
				60g VOC (ALE215)	S		X

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

very fine	<0.063mm	**fine**	0.063mm - 0.1mm	**medium**	0.1mm - 2mm	**coarse**	2mm - 10mm	**very coarse**	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23740650	SPDL-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740666	SPDL-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740683	SPJB-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740687	SPJB-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740693	SPJB-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740604	W106-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740671	W177-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740678	W177-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740700	W191-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740611	W192-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740619	W192-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740629	W204-19	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740639	W204-20	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.3	10	7.8	8.7	11	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0217 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		15.9 #	20.7 #	3.81 #	35.5 #	52.6 #	4.97 #
pH	1 pH Units	TM133		9.22 M	9.51 M	12.8 M	10.6 M	9.09 M	9.83 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.23 M	2.62 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.4 M	8.01 M	<6 M	2.6 M	5.24 M	10.5 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.2 M	<0.02 M	<0.02 M	0.0526 M
Chromium	<0.9 mg/kg	TM181		144 M	30.7 M	398 M	301 M	164 M	52.9 M
Copper	<1.4 mg/kg	TM181		14.6 M	12.8 M	28 M	7.04 M	18.2 M	18.4 M
Iron	<1000 mg/kg	TM181		44300 #	19500 #	142000 #	131000 #	96200 #	61800 #
Lead	<0.7 mg/kg	TM181		17.6 M	8.89 M	22.2 M	<0.7 M	14.8 M	93 M
Manganese	<0.13 mg/kg	TM181		9390 M	3080 M	46900 M	23400 M	18900 M	7400 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<1 M	<0.1 M	<0.1 M	0.355 M
Nickel	<0.2 mg/kg	TM181		12.7 M	9.22 M	14.1 M	0.802 M	18.3 M	15.7 M
Selenium	<1 mg/kg	TM181		3.41 #	1.75 #	22 #	4.55 #	7.23 #	2.89 #
Vanadium	<0.2 mg/kg	TM181		79.3 #	25.6 #	662 #	284 #	219 #	125 #
Zinc	<1.9 mg/kg	TM181		85.5 M	90.7 M	110 M	41.1 M	78.6 M	443 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	13	13	13	13	21
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49.7 #	25 #	13.9 #	7.86 #	6.5 #	12.9 #
pH	1 pH Units	TM133		9.19 M	8.79 M	9.02 M	8.87 M	8.75 M	9.41 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	1.25 M
Arsenic	<0.6 mg/kg	TM181		10.6 M	9.39 M	10.4 M	11.6 M	9.5 M	8.67 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.342 M	<0.02 M	<0.02 M	<0.02 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		40.1 M	66.6 M	98 M	45.9 M	64.6 M	162 M
Copper	<1.4 mg/kg	TM181		24.7 M	84.2 M	18.8 M	16.8 M	14.1 M	19.4 M
Iron	<1000 mg/kg	TM181		88600 #	121000 #	87900 #	88800 #	69600 #	121000 #
Lead	<0.7 mg/kg	TM181		85.1 M	90.5 M	101 M	69.3 M	70.1 M	119 M
Manganese	<0.13 mg/kg	TM181		3570 M	3910 M	9370 M	5290 M	4380 M	11600 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	0.265 M	<0.1 M	0.103 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		25.4 M	26 M	19 M	15.9 M	17.9 M	17.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	3.13 #	<1 #	<1 #	1.71 #
Vanadium	<0.2 mg/kg	TM181		78.7 #	59.1 #	279 #	86.9 #	141 #	398 #
Zinc	<1.9 mg/kg	TM181		235 M	285 M	378 M	314 M	289 M	453 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	14
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 M
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132	6.83 #
pH	1 pH Units	TM133	9.27 M
Cyanide, Total	<1 mg/kg	TM153	<1 M
Arsenic	<0.6 mg/kg	TM181	11.3 M
Cadmium	<0.02 mg/kg	TM181	0.321 M
Chromium	<0.9 mg/kg	TM181	90.4 M
Copper	<1.4 mg/kg	TM181	22.9 M
Iron	<1000 mg/kg	TM181	77600 #
Lead	<0.7 mg/kg	TM181	106 M
Manganese	<0.13 mg/kg	TM181	8500 M
Mercury	<0.1 mg/kg	TM181	<0.1 M
Nickel	<0.2 mg/kg	TM181	23.5 M
Selenium	<1 mg/kg	TM181	3 #
Vanadium	<0.2 mg/kg	TM181	157 #
Zinc	<1.9 mg/kg	TM181	429 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.8	93	97.3	94.9	97.2	94.4
Acenaphthene-d10 % recovery**	%	TM218		89.8	89.7	96	92.9	97.3	91.5
Phenanthrene-d10 % recovery**	%	TM218		88.5	89.8	97.3	91.6	97.2	91.6
Chrysene-d12 % recovery**	%	TM218		85.6	91.7	85.3	89.7	80	82.8
Perylene-d12 % recovery**	%	TM218		85	90.2	81.4	90.3	72.7	87.3
Naphthalene	<9 µg/kg	TM218		419 M	512 M	169 M	432 M	919 M	280 M
Acenaphthylene	<12 µg/kg	TM218		642 M	587 M	50.7 M	541 M	1660 M	43 M
Acenaphthene	<8 µg/kg	TM218		30.5 M	37.4 M	228 M	49.7 M	89.7 M	13.2 M
Fluorene	<10 µg/kg	TM218		174 M	252 M	123 M	138 M	542 M	34 M
Phenanthrene	<15 µg/kg	TM218		2380 M	2620 M	2270 M	1760 M	6360 M	201 M
Anthracene	<16 µg/kg	TM218		561 M	734 M	441 M	517 M	1920 M	68.5 M
Fluoranthene	<17 µg/kg	TM218		6150 M	6520 M	4710 M	4050 M	15600 M	415 M
Pyrene	<15 µg/kg	TM218		4600 M	5000 M	4150 M	3040 M	10700 M	362 M
Benz(a)anthracene	<14 µg/kg	TM218		2860 M	3570 M	2380 M	2270 M	6690 M	216 M
Chrysene	<10 µg/kg	TM218		2420 M	2990 M	2790 M	1960 M	6140 M	219 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4510 M	5330 M	4030 M	3710 M	8580 M	340 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1440 M	1740 M	1480 M	1150 M	3040 M	127 M
Benzo(a)pyrene	<15 µg/kg	TM218		2620 M	3500 M	2770 M	2170 M	5940 M	222 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2550 M	3180 M	2150 M	2230 M	5100 M	217 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		508 M	614 M	401 M	458 M	1040 M	38.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2020 M	2610 M	1930 M	1790 M	4450 M	195 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		33900	39800	30100	26300	78800	2990

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90.4	96	92.4	90.4	95.7	95.7
Acenaphthene-d10 % recovery**	%	TM218		84	92.4	87.6	87.4	89.6	89.3
Phenanthrene-d10 % recovery**	%	TM218		82.1	91.4	85.8	86.4	82.6	84
Chrysene-d12 % recovery**	%	TM218		80.5	94.4	83.2	86.9	72.1	75.4
Perylene-d12 % recovery**	%	TM218		81.1	92.6	81.6	88.2	75.6	74.7
Naphthalene	<9 µg/kg	TM218		624 M	519 M	383 M	342 M	242 M	443 M
Acenaphthylene	<12 µg/kg	TM218		1020 M	968 M	233 M	441 M	138 M	165 M
Acenaphthene	<8 µg/kg	TM218		70 M	42.4 M	37.1 M	30.1 M	17.9 M	41.3 M
Fluorene	<10 µg/kg	TM218		371 M	312 M	129 M	404 M	94.3 M	173 M
Phenanthrene	<15 µg/kg	TM218		3190 M	2830 M	1210 M	3340 M	655 M	1030 M
Anthracene	<16 µg/kg	TM218		1060 M	1320 M	344 M	858 M	204 M	290 M
Fluoranthene	<17 µg/kg	TM218		10500 M	10500 M	2140 M	5110 M	1270 M	1680 M
Pyrene	<15 µg/kg	TM218		7760 M	7570 M	1590 M	3490 M	873 M	1150 M
Benz(a)anthracene	<14 µg/kg	TM218		5150 M	5200 M	1160 M	1940 M	551 M	656 M
Chrysene	<10 µg/kg	TM218		4410 M	4350 M	1080 M	1690 M	543 M	659 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		8690 M	7780 M	1770 M	2530 M	807 M	887 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		2490 M	2630 M	572 M	789 M	257 M	277 M
Benzo(a)pyrene	<15 µg/kg	TM218		5120 M	4830 M	1030 M	1580 M	497 M	435 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5140 M	4470 M	1080 M	1420 M	386 M	384 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		990 M	887 M	216 M	278 M	78.3 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		3920 M	3420 M	816 M	1070 M	385 M	319 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		60500	57600	13800	25300	7000	8580

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	91.9
Acenaphthene-d10 % recovery**	%	TM218	91.4
Phenanthrene-d10 % recovery**	%	TM218	90.2
Chrysene-d12 % recovery**	%	TM218	86.9
Perylene-d12 % recovery**	%	TM218	83.8
Naphthalene	<9 µg/kg	TM218	492 M
Acenaphthylene	<12 µg/kg	TM218	317 M
Acenaphthene	<8 µg/kg	TM218	42.1 M
Fluorene	<10 µg/kg	TM218	196 M
Phenanthrene	<15 µg/kg	TM218	1570 M
Anthracene	<16 µg/kg	TM218	523 M
Fluoranthene	<17 µg/kg	TM218	3560 M
Pyrene	<15 µg/kg	TM218	2570 M
Benz(a)anthracene	<14 µg/kg	TM218	1820 M
Chrysene	<10 µg/kg	TM218	1550 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	2560 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	844 M
Benzo(a)pyrene	<15 µg/kg	TM218	1520 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	1390 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	292 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	1120 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	20400

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		56.6 4	45.6 4	116	51.3 4	54.3 4	74.6
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	19.2
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	43.2
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	1030	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1550	<1000	12600	3470	3680	3980
Aliphatics >C21-C35	<1000 µg/kg	TM414		4740	3230	78600	16000	12400	26000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	28500	1420	1510	10000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		7000	<5000	121000	22200	18400	40400
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		123000	83300	231000	128000	226000	144000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	28.8
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1100	11900
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1640	1730	<1000	4150	3810	13800
Aromatics > EC16-EC21	<1000 µg/kg	TM414		19300	12700	17800	20900	35900	34200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		85300	54200	79700	71300	147000	39400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9600	9330	12400	8770	19800	4530
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1180	1370	1880	1040	2010	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		116000	78400	111000	106000	208000	104000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		123000	78400	231000	128000	226000	144000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50 4	<50 4	62.4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20	<20 4	<20 4	62.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		52.7 4	45.6 4	39.4 4	54.7 4	44.6 4	52.3 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1020	1050	1530	<1000	<1000	1190
Aliphatics >C16-C21	<1000 µg/kg	TM414		5140	4780	4410	1380	<1000	3780
Aliphatics >C21-C35	<1000 µg/kg	TM414		13300	12200	20700	9240	7380	16200
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	4560	2410	1160	3590
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		20000	18500	31500	13400	9020	25100
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		505000	289000	101000	64200	35200	49100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1330	1160	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9610	4820	2530	1510	<1000	1510
Aromatics > EC16-EC21	<1000 µg/kg	TM414		121000	54000	11500	12000	5930	4730
Aromatics > EC21-EC35	<1000 µg/kg	TM414		295000	175000	46100	33200	18500	16400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		58400	36200	8590	3540	1330	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		11000	6060	1680	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		485000	271000	69300	50800	26200	24100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		505000	289000	101000	64200	35200	49100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20 4	<20 4	<20 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	6.4 4
Aliphatics >C5-C6	<10 µg/kg	TM089	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414	4860
Aliphatics >C21-C35	<1000 µg/kg	TM414	33800
Aliphatics >C35-C44	<1000 µg/kg	TM414	8530
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	48000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	141000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414	1940
Aromatics > EC16-EC21	<1000 µg/kg	TM414	14900
Aromatics > EC21-EC35	<1000 µg/kg	TM414	65300
Aromatics >EC35-EC44	<1000 µg/kg	TM414	10100
Aromatics > EC40-EC44	<1000 µg/kg	TM414	1500
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	93100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	141000
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50 4
GRO >C5-C10	<20 µg/kg	TM089	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Dibromofluoromethane**	%	TM116		102	102	103	103	101	106
Toluene-d8**	%	TM116		94	98.7	98.5	94.3	86.3	99.3
4-Bromofluorobenzene**	%	TM116		81	88.4	94.7	78.4	82	96.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Dibromofluoromethane**	%	TM116		109	96	99.1	109	109	106
Toluene-d8**	%	TM116		99.2	95.4	80.1	98.3	96.6	92.4
4-Bromofluorobenzene**	%	TM116		87.2	81	79.4	87.6	85.6	92
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	97.6
Toluene-d8**	%	TM116	85.4
4-Bromofluorobenzene**	%	TM116	74.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<200 M
Benzene	<9 µg/kg	TM116	<180 M
Toluene	<7 µg/kg	TM116	<140 M
Ethylbenzene	<4 µg/kg	TM116	<80 M
p/m-Xylene	<10 µg/kg	TM116	<200 #
o-Xylene	<10 µg/kg	TM116	<200 M
Naphthalene	<13 µg/kg	TM116	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.4
Sum of BTEX	<40 µg/kg	TM116	<800

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740666 TM048	24/02/2021	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJB-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740687 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W106-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740604 TM048	24/02/2021	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W177-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740678 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W191-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740700 TM048	24/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W192-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740619 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-20 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740639 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23740650	23740666	23740683	23740687	23740693	23740604	23740671	23740678	23740700	23740611
Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1	W177-1	W177-2	W191-1	W192-1
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples		24-Feb-2021		23-Feb-2021		24-Feb-2021		23-Feb-2021	24-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	24-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	24-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021

Lab Sample No(s)	23740619	23740629	23740639
Customer Sample Ref.	W192-2	W204-19	W204-20
AGS Ref.			
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	23-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021
Metals in solid samples by OES	24-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	24-Feb-2021	24-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 March 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210218-32
Your Reference:	P18-669
Location:	Llanwern
Report No:	589805

This report has been revised and directly supersedes 589801 in its entirety.

We received 54 samples on Thursday February 18, 2021 and 54 of these samples were scheduled for analysis which was completed on Tuesday March 09, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23748251	SPDL-1		0.20 - 0.20	16/02/2021
23747881	SPDL-2		0.20 - 0.20	16/02/2021
23747887	SPDL-3		0.20 - 0.20	16/02/2021
23747896	SPDL-4		0.20 - 0.20	16/02/2021
23748172	SPJJ-1		0.20 - 0.20	16/02/2021
23748234	SPJJ-2		0.20 - 0.20	16/02/2021
23748241	SPJJ-3		0.20 - 0.20	16/02/2021
23748245	SPJJ-4		0.20 - 0.20	16/02/2021
23747877	SPLB-1		0.20 - 0.20	16/02/2021
23747944	SPLB-2		0.20 - 0.20	16/02/2021
23748025	SPLB-3		0.20 - 0.20	16/02/2021
23748100	SPLB-4		0.20 - 0.20	16/02/2021
23747902	W35-1		0.20 - 0.20	16/02/2021
23747909	W35-2		0.20 - 0.20	16/02/2021
23747914	W35-3		0.20 - 0.20	16/02/2021
23747921	W35-4		0.20 - 0.20	16/02/2021
23747924	W35-5		0.20 - 0.20	16/02/2021
23747930	W35-6		0.20 - 0.20	16/02/2021
23748130	W129-1		0.20 - 0.20	17/02/2021
23748135	W129-2		0.20 - 0.20	17/02/2021
23747982	W131-1		0.20 - 0.20	17/02/2021
23747988	W131-2		0.20 - 0.20	17/02/2021
23748000	W131-3		0.20 - 0.20	17/02/2021
23748009	W131-4		0.20 - 0.20	17/02/2021
23748017	W156-1		0.20 - 0.20	17/02/2021
23748032	W156-2		0.20 - 0.20	17/02/2021
23748046	W156-3		0.20 - 0.20	17/02/2021
23748052	W156-4		0.20 - 0.20	17/02/2021
23748060	W156-5		0.20 - 0.20	17/02/2021
23748067	W156-6		0.20 - 0.20	17/02/2021
23748072	W156-7		0.20 - 0.20	17/02/2021
23748077	W156-8		0.20 - 0.20	17/02/2021
23748084	W156-9		0.20 - 0.20	17/02/2021
23748094	W206-1		0.20 - 0.20	17/02/2021
23748105	W206-2		0.20 - 0.20	17/02/2021
23748115	W206-3		0.20 - 0.20	17/02/2021
23748120	W206-4		0.20 - 0.20	17/02/2021
23748200	W208-1		0.20 - 0.20	17/02/2021
23748230	W208-2		0.20 - 0.20	17/02/2021
23747937	W209-1		0.20 - 0.20	17/02/2021
23747950	W209-2		0.20 - 0.20	17/02/2021
23747954	W209-3		0.20 - 0.20	17/02/2021
23747961	W209-4		0.20 - 0.20	17/02/2021
23747966	W209-5		0.20 - 0.20	17/02/2021
23747973	W209-6		0.20 - 0.20	17/02/2021
23748089	W156-10		0.20 - 0.20	17/02/2021
23748142	W209B-1		0.20 - 0.20	17/02/2021
23748146	W209B-2		0.20 - 0.20	17/02/2021
23748156	W209B-3		0.20 - 0.20	17/02/2021
23748161	W209B-4		0.20 - 0.20	17/02/2021
23748167	W209C-1		0.20 - 0.20	17/02/2021
23748178	W209C-2		0.20 - 0.20	17/02/2021
23748183	W209C-3		0.20 - 0.20	17/02/2021
23748191	W209C-4		0.20 - 0.20	17/02/2021

Only received samples which have had analysis scheduled will be shown on the following pages.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23748251		23747881		23747887		23747896		23748172		23748234		23748241		23748245				
Customer Sample Reference			SPDL-1		SPDL-2		SPDL-3		SPDL-4		SPJ-1		SPJ-2		SPJ-3		SPJ-4				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8											X								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	

23747921	W35-4		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
23747914	W35-3		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23747909	W35-2		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
23747902	W35-1		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23748100	SPLB-4		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
23748025	SPLB-3		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23747944	SPLB-2		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
23747877	SPLB-1		0.20 - 0.20	60g VOC (ALE215)	S							X							X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23748245	SPJJ-4		0.20 - 0.20	60g VOC (ALE215)	S							X							X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23747924		23747930		23748130			23748135		23747982			23747988		23748000		23748009		
Customer Sample Reference			W35-5		W35-6		W129-1			W129-2		W131-1			W131-2		W131-3		W131-4		
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20			0.20 - 0.20		0.20 - 0.20			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		
Container			60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8	X					X													
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	

23748077	W156-8		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23748072	W156-7		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23748067	W156-6		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23748060	W156-5		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x		x														
23748052	W156-4		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23748046	W156-3		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23748032	W156-2		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23748017	W156-1		0.20 - 0.20	60g VOC (ALE215)	S								x										x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23748009	W131-4		0.20 - 0.20	60g VOC (ALE215)	S								x										x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23748084	W156-9		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
			23748084	W156-9		0.20 - 0.20	60g VOC (ALE215)	S
			23748094	W206-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
			23748094	W206-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748094	W206-1		0.20 - 0.20	60g VOC (ALE215)	S
			23748105	W206-2		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748105	W206-2		0.20 - 0.20	60g VOC (ALE215)	S
			23748115	W206-3		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
			23748115	W206-3		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748115	W206-3		0.20 - 0.20	60g VOC (ALE215)	S
			23748120	W206-4		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748120	W206-4		0.20 - 0.20	60g VOC (ALE215)	S
			23748200	W208-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
			23748200	W208-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748200	W208-1		0.20 - 0.20	60g VOC (ALE215)	S
			23748230	W208-2		0.20 - 0.20	250g Amber Jar (ALE210)	S
			23748230	W208-2		0.20 - 0.20	60g VOC (ALE215)	S
			23747937	W209-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
			23747937	W209-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54	X					
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8						
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54	X					
EPH CWG GC (S)	All	NDPs: 0 Tests: 54	X					
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54		X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 54	X					
PAH by GCMS	All	NDPs: 0 Tests: 54	X					
pH	All	NDPs: 0 Tests: 54	X					
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54	X					
Sample description	All	NDPs: 0 Tests: 54	X					
Total Organic Carbon	All	NDPs: 0 Tests: 54	X					
TPH CWG GC (S)	All	NDPs: 0 Tests: 54	X					
VOC MS (S)	All	NDPs: 0 Tests: 54		X				
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54			X			
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27				X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8					X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54			X			
EPH CWG GC (S)	All	NDPs: 0 Tests: 54			X			
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54				X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 54			X			
PAH by GCMS	All	NDPs: 0 Tests: 54			X			
pH	All	NDPs: 0 Tests: 54			X			
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54			X			
Sample description	All	NDPs: 0 Tests: 54			X			
Total Organic Carbon	All	NDPs: 0 Tests: 54			X			
TPH CWG GC (S)	All	NDPs: 0 Tests: 54			X			
VOC MS (S)	All	NDPs: 0 Tests: 54				X		

23748156	W209B-3		0.20 - 0.20	1kg TUB with Handle (ALE260)	S			X													
23748146	W209B-2		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
23748142	W209B-1		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S			X													
23748089	W156-10		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
23747973	W209-6		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
23747966	W209-5		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S			X	X												
23747961	W209-4		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
23747954	W209-3		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S			X													
23747950	W209-2		0.20 - 0.20	60g VOC (ALE215)	S							X									X
				250g Amber Jar (ALE210)	S	X				X	X		X	X	X	X	X	X	X	X	
23747937	W209-1		0.20 - 0.20	60g VOC (ALE215)	S							X									X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23748156		23748161		23748167		23748178		23748183		23748191	
Customer Sample Reference			W209B-3		W209B-4		W209C-1		W209C-2		W209C-3		W209C-4	
AGS Reference														
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27					X					X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8										X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
pH	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Sample description	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23748251	SPDL-1	0.20 - 0.20	Black	Loamy Sand	Stones	None
23747881	SPDL-2	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Vegetation	Stones
23747887	SPDL-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747896	SPDL-4	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23748172	SPJJ-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23748234	SPJJ-2	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Brick
23748241	SPJJ-3	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Brick
23748245	SPJJ-4	0.20 - 0.20	Light Brown	Sandy Clay Loam	Stones	Vegetation
23747877	SPLB-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Brick
23747944	SPLB-2	0.20 - 0.20	Dark Brown	Clay	Stones	Vegetation
23748025	SPLB-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23748100	SPLB-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747902	W35-1	0.20 - 0.20	Black	Sandy Silt Loam	Stones	None
23747909	W35-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747914	W35-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747921	W35-4	0.20 - 0.20	Black	Loamy Sand	Stones	Vegetation
23747924	W35-5	0.20 - 0.20	Dark Brown	Sand	None	Stones
23747930	W35-6	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23748130	W129-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23748135	W129-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23747982	W131-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23747988	W131-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748000	W131-3	0.20 - 0.20	Black	Loamy Sand	Stones	None
23748009	W131-4	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Brick
23748017	W156-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748032	W156-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748046	W156-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748052	W156-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748060	W156-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748067	W156-6	0.20 - 0.20	Dark Brown	Sand	N/A	Stones
23748072	W156-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748077	W156-8	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748084	W156-9	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748094	W206-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748105	W206-2	0.20 - 0.20	Black	Loamy Sand	Stones	Vegetation
23748115	W206-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748120	W206-4	0.20 - 0.20	Black	Loamy Sand	Stones	N/A
23748200	W208-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23748230	W208-2	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

			Colour	Description	Inclusions	Inclusions 2
23747937	W209-1	0.20 - 0.20	Light Brown	Silty Clay Loam	Stones	None
23747950	W209-2	0.20 - 0.20	Black	Silty Clay Loam	Stones	None
23747954	W209-3	0.20 - 0.20	Black	Sandy Silt Loam	Stones	Brick
23747961	W209-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23747966	W209-5	0.20 - 0.20	Dark Brown	Silty Clay Loam	Brick	Stones
23747973	W209-6	0.20 - 0.20	Black	Silty Clay Loam	Stones	None
23748089	W156-10	0.20 - 0.20	Black	Sandy Silt Loam	Stones	None
23748142	W209B-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748146	W209B-2	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23748156	W209B-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23748161	W209B-4	0.20 - 0.20	Dark Brown	Sand	None	Stones
23748167	W209C-1	0.20 - 0.20	Dark Brown	Stone/Soil	None	Stones
23748178	W209C-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748183	W209C-3	0.20 - 0.20	Dark Brown	Stone/Soil	None	Stones
23748191	W209C-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	18	14	14	12	10
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0122 M	<0.01 M	0.0116 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0117 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.0351 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0468 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		23.3 #	21.9 #	15.4 #	24.1 #	4.03 #	6.62 #
pH	1 pH Units	TM133		8.33 M	8.98 M	8.18 M	8.78 M	8.73 M	8.95 M
Cyanide, Total	<1 mg/kg	TM153		26.8 M	46 M	26.9 M	46.7 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.29 M	14 M	<6 M	9.28 M	8.86 M	13.2 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.497 M	<0.2 M	0.272 M	0.247 M	0.699 M
Chromium	<0.9 mg/kg	TM181		106 M	37.8 M	26.6 M	40.7 M	65.9 M	88.6 M
Copper	<1.4 mg/kg	TM181		24.1 M	25.6 M	30.5 M	39.8 M	14.6 M	25.7 M
Iron	<1000 mg/kg	TM181		67500 #	41200 #	65600 #	33400 #	50000 #	27300 #
Lead	<0.7 mg/kg	TM181		44.1 M	127 M	38.7 M	93.8 M	48 M	86.3 M
Manganese	<0.13 mg/kg	TM181		9420 M	2510 M	3810 M	3550 M	6920 M	5460 M
Mercury	<0.1 mg/kg	TM181		2.17 M	5.47 M	2.51 M	6.7 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.6 M	28.3 M	18.6 M	29.8 M	20.7 M	23.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	1.62 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		208 #	64.1 #	90.1 #	51.9 #	114 #	135 #
Zinc	<1.9 mg/kg	TM181		118 M	180 M	136 M	246 M	127 M	262 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	15	17	26	16	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0121 M	<0.01 M	0.0119 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.36 #	6.57 #	11.7 #	4.88 #	5.98 #	13.5 #
pH	1 pH Units	TM133		8.64 M	8.83 M	8.01 M	8.13 M	8.42 M	8.36 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.67 M	7.53 M	16 M	10.8 M	8.95 M	12.8 M
Cadmium	<0.02 mg/kg	TM181		0.392 M	0.71 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		119 M	43.3 M	60.5 M	61.6 M	401 M	264 M
Copper	<1.4 mg/kg	TM181		<14 M	17.6 M	24.1 M	21.2 M	19.2 M	26.4 M
Iron	<1000 mg/kg	TM181		56500 #	35000 #	36500 #	43300 #	112000 #	78800 #
Lead	<0.7 mg/kg	TM181		58.1 M	49.5 M	51.6 M	39.6 M	34.1 M	72.7 M
Manganese	<0.13 mg/kg	TM181		7230 M	3530 M	2290 M	1230 M	34600 M	10300 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		21 M	25.3 M	31.2 M	39.5 M	19.5 M	32.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	19 #	<10 #
Vanadium	<0.2 mg/kg	TM181		136 #	80.2 #	99.5 #	81.2 #	235 #	192 #
Zinc	<1.9 mg/kg	TM181		114 M	127 M	139 M	142 M	87.3 M	215 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	12	11	15	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0113 M	<0.01 M	<0.01 M	0.0111 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0111 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		59.3 #	3.17 #	5.5 #	29.5 #	2.98 #	7.93 #
pH	1 pH Units	TM133		12.1 M	11.7 M	9.01 M	12.1 M	12 M	8.95 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.6 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.27 M	7.11 M	9.62 M	8 M	7.46 M	11.6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.241 M	<0.2 M	<0.2 M	<0.2 M	0.232 M
Chromium	<0.9 mg/kg	TM181		289 M	236 M	126 M	307 M	218 M	68.6 M
Copper	<1.4 mg/kg	TM181		36.6 M	125 M	20.1 M	553 M	32.2 M	24.3 M
Iron	<1000 mg/kg	TM181		120000 #	161000 #	71900 #	178000 #	114000 #	53900 #
Lead	<0.7 mg/kg	TM181		109 M	89.3 M	85.8 M	119 M	54.4 M	80.2 M
Manganese	<0.13 mg/kg	TM181		29900 M	31700 M	11400 M	37900 M	22700 M	7030 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		23.8 M	46.3 M	13.6 M	195 M	24.1 M	17.1 M
Selenium	<1 mg/kg	TM181		16.8 #	15.1 #	<10 #	19.3 #	16.8 #	<10 #
Vanadium	<0.2 mg/kg	TM181		638 #	391 #	155 #	770 #	262 #	108 #
Zinc	<1.9 mg/kg	TM181		131 M	321 M	619 M	179 M	110 M	657 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #				<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #				<0.001 #	
Additional Asbestos Components (Using TM048)		TM304		None #				None #	
Analysts Comments		TM304		N/a				0	
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0015 #				<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	12	11	12	12	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		15.2 #	10.2 #	5.83 #	4.5 #	4.41 #	18.3 #
pH	1 pH Units	TM133		8.74 M	9 M	9.16 M	8.95 M	8.63 M	8.88 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.11 M	<1 M	1.11 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	8.13 M	9.03 M	12.7 M	19.4 M	11.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M	0.376 M
Chromium	<0.9 mg/kg	TM181		89 M	133 M	26.1 M	62.2 M	10.9 M	124 M
Copper	<1.4 mg/kg	TM181		<14 M	18.2 M	41 M	25.1 M	45.5 M	28.6 M
Iron	<1000 mg/kg	TM181		28200 #	84600 #	148000 #	141000 #	233000 #	111000 #
Lead	<0.7 mg/kg	TM181		49.6 M	71.2 M	53.1 M	114 M	85.1 M	121 M
Manganese	<0.13 mg/kg	TM181		7860 M	10500 M	4520 M	6790 M	6260 M	10700 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		15.9 M	20.2 M	27.2 M	27.1 M	43.6 M	25.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		350 #	404 #	99.9 #	137 #	99 #	193 #
Zinc	<1.9 mg/kg	TM181		153 M	212 M	168 M	353 M	299 M	373 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		0					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	15	15	12	13	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0118 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M	0.0117 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0228 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.86 #	9.88 #	4.29 #	4.03 #	10.4 #	1.46 #
pH	1 pH Units	TM133		12.7 M	8.96 M	9.01 M	11.3 M	10.7 M	12.7 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	3.3 M	<1 M	2.28 M	3.44 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.27 M	15.7 M	11.2 M	9.36 M	<6 M	13.6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	3.53 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		553 M	<9 M	<9 M	155 M	218 M	514 M
Copper	<1.4 mg/kg	TM181		38.6 M	30 M	<14 M	21.7 M	24.4 M	45.7 M
Iron	<1000 mg/kg	TM181		212000 #	352000 #	178000 #	280000 #	156000 #	284000 #
Lead	<0.7 mg/kg	TM181		29.7 M	892 M	<7 M	82.7 M	48.7 M	31.4 M
Manganese	<0.13 mg/kg	TM181		48200 M	8360 M	284 M	19500 M	18400 M	39600 M
Mercury	<0.1 mg/kg	TM181		<1 M	1.25 M	2.06 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		35.5 M	36 M	<2 M	23.2 M	19.8 M	40.6 M
Selenium	<1 mg/kg	TM181		27.7 #	<10 #	<10 #	<10 #	10.5 #	19.4 #
Vanadium	<0.2 mg/kg	TM181		848 #	165 #	2.73 #	550 #	885 #	1000 #
Zinc	<1.9 mg/kg	TM181		62.1 M	2180 M	<19 M	193 M	129 M	82.7 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						0.0349 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						0.0038 #	
Additional Asbestos Components (Using TM048)		TM304						PCM analysis detecte #	
Analysts Comments		TM304						N/A	
Asbestos Quantification - Total - %	<0.001 %	TM304						0.0387 #	

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	18	10	14	14	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.88 #	8.9 #	4.33 #	9.67 #	75.7 #	5.05 #
pH	1 pH Units	TM133		8.61 M	10.1 M	11.3 M	9.97 M	8.95 M	9.27 M
Cyanide, Total	<1 mg/kg	TM153		3.45 M	<1 M	4.84 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		24.9 M	9.46 M	7.27 M	9.17 M	<6 M	7.44 M
Cadmium	<0.02 mg/kg	TM181		5.2 M	<0.2 M	<0.2 M	0.347 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		106 M	<9 M	225 M	97.9 M	105 M	222 M
Copper	<1.4 mg/kg	TM181		34.1 M	22.8 M	19.5 M	23.6 M	33.5 M	21.5 M
Iron	<1000 mg/kg	TM181		190000 #	243000 #	220000 #	83800 #	65100 #	91600 #
Lead	<0.7 mg/kg	TM181		1040 M	80.8 M	50.9 M	80.9 M	32.7 M	75.7 M
Manganese	<0.13 mg/kg	TM181		13900 M	7350 M	31400 M	7320 M	7680 M	11400 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		35.1 M	26.2 M	16.4 M	29.8 M	21 M	24.7 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	12.4 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		223 #	168 #	1120 #	217 #	236 #	251 #
Zinc	<1.9 mg/kg	TM181		2560 M	233 M	116 M	241 M	92.1 M	274 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					0		
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #		

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	13	17	12	15	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	0.475 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	0.475 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		54.8 #	4.12 #	6.86 #	11.4 #	33.8 #	49.1 #
pH	1 pH Units	TM133		8.43 M	10.4 M	10.6 M	8.83 M	8.97 M	8.96 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	36.1 M	35.9 M	124 M
Arsenic	<0.6 mg/kg	TM181		8.56 M	17.8 M	11.6 M	15.8 M	<6 M	10.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.382 M	0.448 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		115 M	205 M	104 M	<9 M	142 M	70.2 M
Copper	<1.4 mg/kg	TM181		25.2 M	33.6 M	27.9 M	36.6 M	24.9 M	27.7 M
Iron	<1000 mg/kg	TM181		47800 #	63900 #	61700 #	274000 #	76900 #	90200 #
Lead	<0.7 mg/kg	TM181		32.6 M	146 M	105 M	304 M	158 M	270 M
Manganese	<0.13 mg/kg	TM181		6260 M	10100 M	6800 M	7720 M	6430 M	4820 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	5.87 M	1.84 M	3.44 M
Nickel	<0.2 mg/kg	TM181		26.4 M	25.7 M	24.2 M	44.4 M	22.6 M	20.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		304 #	163 #	150 #	129 #	114 #	72.5 #
Zinc	<1.9 mg/kg	TM181		87.6 M	264 M	285 M	694 M	216 M	191 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	12	12	11	14	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0116 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0232 M	<0.01 M	<0.01 M	0.0112 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		17.4 #	21.6 #	33.8 #	7.53 #	46.4 #	64.1 #
pH	1 pH Units	TM133		9.08 M	9.15 M	8.71 M	10.4 M	9.32 M	8.93 M
Cyanide, Total	<1 mg/kg	TM153		273 M	41.7 M	31.5 M	1.84 M	1.96 M	4.05 M
Arsenic	<0.6 mg/kg	TM181		12.6 M	11 M	9.56 M	<6 M	9.46 M	8.55 M
Cadmium	<0.02 mg/kg	TM181		0.537 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		32.3 M	35.5 M	52.2 M	214 M	49 M	38.2 M
Copper	<1.4 mg/kg	TM181		30 M	20 M	33.2 M	19 M	33.5 M	24.7 M
Iron	<1000 mg/kg	TM181		236000 #	22100 #	79700 #	170000 #	85300 #	84200 #
Lead	<0.7 mg/kg	TM181		362 M	127 M	102 M	59.5 M	78 M	71.2 M
Manganese	<0.13 mg/kg	TM181		8310 M	4410 M	4440 M	25900 M	5670 M	8710 M
Mercury	<0.1 mg/kg	TM181		6.12 M	3.73 M	2.36 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		36.4 M	24.7 M	20.9 M	14.9 M	30.3 M	24.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	17.9 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		172 #	79.1 #	131 #	1430 #	137 #	77.9 #
Zinc	<1.9 mg/kg	TM181		831 M	245 M	144 M	152 M	172 M	172 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			<0.001 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304			<0.001 #				
Additional Asbestos Components (Using TM048)		TM304			None #				
Analysts Comments		TM304			0				
Asbestos Quantification - Total - %	<0.001 %	TM304			<0.001 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.9	15	10	11	12	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 #	<12 M	<12 #	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 #	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0222 #	<0.01 M	<0.01 #	0.0112 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 #	<0.015 M	<0.015 #	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 #	<0.035 M	<0.035 #	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		20.3 #	50.3 #	6.84 #	6.9 #	4.84 #	4.64 #
pH	1 pH Units	TM133		8.88 M	9.11 M	10 #	9.64 M	10.6 #	9.58 M
Cyanide, Total	<1 mg/kg	TM153		5.82 M	2.7 M	<1 #	4.41 M	<1 #	2.07 M
Arsenic	<0.6 mg/kg	TM181		<6 M	8.52 M	<6 #	8.2 M	9.58 #	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 #	<0.2 M	0.212 #	<0.2 M
Chromium	<0.9 mg/kg	TM181		194 M	93.2 M	66.8 #	70 M	213 #	91 M
Copper	<1.4 mg/kg	TM181		24.7 M	21.9 M	<14 #	25.3 M	45.5 #	67.5 M
Iron	<1000 mg/kg	TM181		136000 #	80400 #	76600 #	84600 #	111000 #	58200 #
Lead	<0.7 mg/kg	TM181		79.6 M	72.2 M	67.7 #	202 M	125 #	64.1 M
Manganese	<0.13 mg/kg	TM181		18000 M	10600 M	6420 #	6890 M	20300 #	3960 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 #	<1 M	<1 #	<1 M
Nickel	<0.2 mg/kg	TM181		15.4 M	22.4 M	12.1 #	29.1 M	20.4 #	27.9 M
Selenium	<1 mg/kg	TM181		14 #	<10 #	<10 #	<10 #	13.7 #	<10 #
Vanadium	<0.2 mg/kg	TM181		407 #	173 #	115 #	78.9 #	503 #	105 #
Zinc	<1.9 mg/kg	TM181		177 M	126 M	170 #	374 M	308 #	3020 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.5	89.7	92.2	91.1	97.2	92.3
Acenaphthene-d10 % recovery**	%	TM218		96.4	83.7	93.2	92.9	91.6	96.4
Phenanthrene-d10 % recovery**	%	TM218		101	94.9	94.8	95	89.6	99.7
Chrysene-d12 % recovery**	%	TM218		77.1	91	82.4	78.4	80.6	83.2
Perylene-d12 % recovery**	%	TM218		77.3	85.2	84.1	78.1	78	84.6
Naphthalene	<9 µg/kg	TM218		5310 M	3440 M	5400 M	2610 M	78.7 M	52.8 M
Acenaphthylene	<12 µg/kg	TM218		1960 M	2340 M	1800 M	2530 M	65.7 M	54.6 M
Acenaphthene	<8 µg/kg	TM218		150 M	97.7 M	131 M	96.6 M	10.1 M	12.6 M
Fluorene	<10 µg/kg	TM218		288 M	319 M	294 M	316 M	34 M	28.3 M
Phenanthrene	<15 µg/kg	TM218		2120 M	3240 M	2770 M	2980 M	335 M	266 M
Anthracene	<16 µg/kg	TM218		794 M	1590 M	923 M	1440 M	129 M	72.7 M
Fluoranthene	<17 µg/kg	TM218		3250 M	6230 M	4590 M	5290 M	945 M	592 M
Pyrene	<15 µg/kg	TM218		2400 M	4590 M	3360 M	3840 M	685 M	486 M
Benz(a)anthracene	<14 µg/kg	TM218		1400 M	3030 M	2210 M	2430 M	453 M	286 M
Chrysene	<10 µg/kg	TM218		1550 M	3740 M	2020 M	2540 M	441 M	301 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2890 M	5500 M	4370 M	4850 M	609 M	487 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		899 M	1700 M	1350 M	1480 M	175 M	168 M
Benzo(a)pyrene	<15 µg/kg	TM218		1740 M	3240 M	2590 M	2700 M	333 M	293 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2660 M	4970 M	4340 M	4580 M	280 M	202 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		389 M	743 M	509 M	579 M	66.7 M	47.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		3530 M	5430 M	4430 M	4760 M	264 M	246 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		31300	50200	41100	43000	4900	3600

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92	93	98.1	92.6	93.6	92.5
Acenaphthene-d10 % recovery**	%	TM218		88.1	84.3	93.9	94.1	96.8	96.1
Phenanthrene-d10 % recovery**	%	TM218		88.9	94.9	92.5	93.2	99.2	98.1
Chrysene-d12 % recovery**	%	TM218		84.2	94.3	84.2	83	81.8	79
Perylene-d12 % recovery**	%	TM218		86.4	91.6	83	83.3	82.9	80
Naphthalene	<9 µg/kg	TM218		95.9 M	81.2 M	540 M	92.8 M	588 M	334 M
Acenaphthylene	<12 µg/kg	TM218		80.7 M	83.5 M	164 M	32.8 M	211 M	158 M
Acenaphthene	<8 µg/kg	TM218		10.1 M	<8 M	37.2 M	<8 M	39.3 M	37.1 M
Fluorene	<10 µg/kg	TM218		33.3 M	41.3 M	150 M	40.1 M	166 M	109 M
Phenanthrene	<15 µg/kg	TM218		366 M	402 M	658 M	205 M	928 M	560 M
Anthracene	<16 µg/kg	TM218		110 M	111 M	289 M	64.1 M	292 M	401 M
Fluoranthene	<17 µg/kg	TM218		1170 M	1100 M	1050 M	250 M	1670 M	1250 M
Pyrene	<15 µg/kg	TM218		913 M	837 M	768 M	179 M	1220 M	967 M
Benz(a)anthracene	<14 µg/kg	TM218		520 M	524 M	477 M	109 M	694 M	572 M
Chrysene	<10 µg/kg	TM218		476 M	543 M	505 M	92.5 M	703 M	794 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		755 M	790 M	732 M	143 M	1040 M	977 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		287 M	254 M	235 M	42.7 M	316 M	325 M
Benzo(a)pyrene	<15 µg/kg	TM218		474 M	466 M	421 M	85.8 M	621 M	569 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		367 M	406 M	354 M	65.3 M	444 M	383 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		60.2 M	81 M	82.7 M	<23 M	91.2 M	83.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		365 M	388 M	341 M	63.5 M	465 M	428 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6080	6110	6810	1460	9490	7950

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.4	96.9	97.4	93	92.6	87.7
Acenaphthene-d10 % recovery**	%	TM218		97.3	93.9	93.8	100	93.2	89.4
Phenanthrene-d10 % recovery**	%	TM218		97.6	95.3	90.2	104	94.9	91.1
Chrysene-d12 % recovery**	%	TM218		78.4	84.8	80.6	82.9	83.2	87.3
Perylene-d12 % recovery**	%	TM218		75.8	80.8	77.5	85.7	84.6	79.4
Naphthalene	<9 µg/kg	TM218		1500 M	435 M	<90 M	1470 M	285 M	84.7 M
Acenaphthylene	<12 µg/kg	TM218		89.1 M	97.8 M	<120 M	188 M	97.4 M	<60 M
Acenaphthene	<8 µg/kg	TM218		359 M	115 M	<80 M	449 M	71.1 M	<40 M
Fluorene	<10 µg/kg	TM218		265 M	83 M	<100 M	374 M	70.5 M	<50 M
Phenanthrene	<15 µg/kg	TM218		3430 M	1670 M	290 M	5160 M	1340 M	315 M
Anthracene	<16 µg/kg	TM218		620 M	351 M	<160 M	1290 M	387 M	101 M
Fluoranthene	<17 µg/kg	TM218		3760 M	3420 M	603 M	7050 M	2770 M	1080 M
Pyrene	<15 µg/kg	TM218		3170 M	3200 M	488 M	5960 M	2370 M	893 M
Benz(a)anthracene	<14 µg/kg	TM218		1670 M	2270 M	316 M	3470 M	1690 M	616 M
Chrysene	<10 µg/kg	TM218		1830 M	2600 M	354 M	3590 M	1740 M	737 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2430 M	3650 M	569 M	4460 M	2630 M	1150 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		705 M	1240 M	172 M	1430 M	883 M	378 M
Benzo(a)pyrene	<15 µg/kg	TM218		1430 M	2300 M	325 M	2980 M	1690 M	590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		827 M	1740 M	348 M	1800 M	1440 M	628 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		204 M	420 M	<230 M	359 M	242 M	<115 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1030 M	1800 M	361 M	1910 M	1300 M	547 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		23300	25400	3830	41900	19000	7130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.7	93.2	89.6	92.8	90.2	97.1
Acenaphthene-d10 % recovery**	%	TM218		94.9	89.8	87.7	95.6	89	95.5
Phenanthrene-d10 % recovery**	%	TM218		95.9	90.4	90.6	97.5	90.2	95.4
Chrysene-d12 % recovery**	%	TM218		79.4	82.6	88.4	97.4	76.5	79.7
Perylene-d12 % recovery**	%	TM218		78.5	75.3	86	93.3	70.9	76.5
Naphthalene	<9 µg/kg	TM218		299 M	234 M	100 M	95 M	48.5 M	44.9 M
Acenaphthylene	<12 µg/kg	TM218		116 M	159 M	136 M	45.8 M	16.2 M	52 M
Acenaphthene	<8 µg/kg	TM218		248 M	42 M	26 M	11.7 M	<8 M	12 M
Fluorene	<10 µg/kg	TM218		157 M	82.6 M	290 M	19 M	14 M	20 M
Phenanthrene	<15 µg/kg	TM218		1610 M	976 M	1260 M	204 M	138 M	183 M
Anthracene	<16 µg/kg	TM218		430 M	271 M	261 M	49.8 M	28.2 M	<16 M
Fluoranthene	<17 µg/kg	TM218		2400 M	2060 M	1360 M	452 M	177 M	438 M
Pyrene	<15 µg/kg	TM218		2060 M	1560 M	834 M	389 M	137 M	380 M
Benz(a)anthracene	<14 µg/kg	TM218		1140 M	956 M	471 M	285 M	91.3 M	237 M
Chrysene	<10 µg/kg	TM218		1150 M	1000 M	425 M	324 M	108 M	271 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1610 M	1270 M	570 M	546 M	144 M	447 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		509 M	460 M	209 M	173 M	44.5 M	111 M
Benzo(a)pyrene	<15 µg/kg	TM218		1120 M	766 M	328 M	322 M	73.7 M	246 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		635 M	591 M	262 M	291 M	70.5 M	224 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		130 M	135 M	46.7 M	58.4 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		727 M	548 M	231 M	281 M	68.6 M	236 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		14300	11100	6810	3550	1160	2900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.6	94	92.3	91.6	92.6	91.7
Acenaphthene-d10 % recovery**	%	TM218		93.1	89.9	94.2	90.2	93.4	88.4
Phenanthrene-d10 % recovery**	%	TM218		95.5	90.2	96	93.3	89.8	87.2
Chrysene-d12 % recovery**	%	TM218		79.1	78.7	82.9	81.5	78.6	79.6
Perylene-d12 % recovery**	%	TM218		79.9	70.3	82.4	72.4	78.8	77.7
Naphthalene	<9 µg/kg	TM218		358 M	3270 M	3630 M	3200 M	5690 M	553 M
Acenaphthylene	<12 µg/kg	TM218		42.9 M	50.9 M	366 M	758 M	5810 M	76 M
Acenaphthene	<8 µg/kg	TM218		109 M	16.7 M	53.3 M	78.3 M	364 M	135 M
Fluorene	<10 µg/kg	TM218		64.6 M	39.2 M	220 M	440 M	7260 M	92.2 M
Phenanthrene	<15 µg/kg	TM218		986 M	294 M	1470 M	7030 M	102000 M	1280 M
Anthracene	<16 µg/kg	TM218		202 M	64.6 M	368 M	2670 M	41600 M	274 M
Fluoranthene	<17 µg/kg	TM218		1970 M	383 M	2240 M	14100 M	139000 M	2540 M
Pyrene	<15 µg/kg	TM218		1910 M	323 M	1630 M	10600 M	102000 M	2370 M
Benz(a)anthracene	<14 µg/kg	TM218		1200 M	174 M	885 M	4440 M	37900 M	1430 M
Chrysene	<10 µg/kg	TM218		1240 M	171 M	785 M	4910 M	40800 M	1490 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1920 M	284 M	1250 M	6280 M	51200 M	2240 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		725 M	89.1 M	412 M	2060 M	15100 M	839 M
Benzo(a)pyrene	<15 µg/kg	TM218		1500 M	172 M	847 M	4120 M	34400 M	1590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		879 M	149 M	711 M	3530 M	30800 M	1200 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		162 M	32.1 M	110 M	648 M	4020 M	236 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1010 M	163 M	639 M	3490 M	27100 M	1180 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		14300	5680	15600	68400	645000	17500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		87.9	92.3	92.1	93.6	91.4	93.3
Acenaphthene-d10 % recovery**	%	TM218		86.8	96.5	96.8	90.5	92.4	93.2
Phenanthrene-d10 % recovery**	%	TM218		91.2	100	98.4	90.9	91.6	94
Chrysene-d12 % recovery**	%	TM218		79	81.1	79.3	84	80.1	82.5
Perylene-d12 % recovery**	%	TM218		70.1	81.7	80.1	80.9	75.5	82.3
Naphthalene	<9 µg/kg	TM218		4410 M	2520 M	2940 M	246 M	892 M	271 M
Acenaphthylene	<12 µg/kg	TM218		65.5 M	202 M	469 M	157 M	169 M	154 M
Acenaphthene	<8 µg/kg	TM218		30.7 M	35.2 M	90.3 M	19.3 M	125 M	21 M
Fluorene	<10 µg/kg	TM218		73.3 M	150 M	381 M	90.3 M	257 M	88.3 M
Phenanthrene	<15 µg/kg	TM218		503 M	945 M	2380 M	655 M	1570 M	717 M
Anthracene	<16 µg/kg	TM218		135 M	234 M	674 M	213 M	309 M	218 M
Fluoranthene	<17 µg/kg	TM218		622 M	1400 M	3650 M	1580 M	1880 M	1700 M
Pyrene	<15 µg/kg	TM218		577 M	1080 M	3030 M	1140 M	1430 M	1240 M
Benz(a)anthracene	<14 µg/kg	TM218		248 M	492 M	1510 M	686 M	857 M	743 M
Chrysene	<10 µg/kg	TM218		241 M	481 M	1540 M	675 M	876 M	631 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		392 M	718 M	2380 M	960 M	1200 M	1080 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		103 M	239 M	714 M	297 M	397 M	329 M
Benzo(a)pyrene	<15 µg/kg	TM218		215 M	443 M	1460 M	556 M	689 M	631 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		171 M	273 M	1040 M	430 M	491 M	514 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		29.3 M	63 M	209 M	106 M	149 M	89 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		172 M	318 M	1160 M	424 M	515 M	442 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		7980	9590	23600	8240	11800	8870

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.1	92.4	95.2	95.1	92.7	89.8
Acenaphthene-d10 % recovery**	%	TM218		92	93.9	91.6	96.9	92.5	92.9
Phenanthrene-d10 % recovery**	%	TM218		91.1	94.2	92.2	98.2	92.5	89.2
Chrysene-d12 % recovery**	%	TM218		78.5	78	83.3	80.3	82.8	75.2
Perylene-d12 % recovery**	%	TM218		72.3	79.3	80.3	76.5	78.7	71.8
Naphthalene	<9 µg/kg	TM218		948 M	107 M	98.5 M	2770 M	1190 M	1320 M
Acenaphthylene	<12 µg/kg	TM218		197 M	83.6 M	76.1 M	4750 M	144 M	361 M
Acenaphthene	<8 µg/kg	TM218		153 M	19.2 M	21.9 M	452 M	61.7 M	63.1 M
Fluorene	<10 µg/kg	TM218		303 M	44.4 M	86.8 M	5140 M	118 M	321 M
Phenanthrene	<15 µg/kg	TM218		1990 M	318 M	530 M	17600 M	963 M	1920 M
Anthracene	<16 µg/kg	TM218		394 M	124 M	166 M	<16 M	307 M	419 M
Fluoranthene	<17 µg/kg	TM218		2920 M	799 M	835 M	24500 M	2010 M	2950 M
Pyrene	<15 µg/kg	TM218		2150 M	633 M	655 M	14900 M	1620 M	2220 M
Benz(a)anthracene	<14 µg/kg	TM218		1150 M	379 M	379 M	8920 M	1070 M	1400 M
Chrysene	<10 µg/kg	TM218		923 M	358 M	371 M	8600 M	941 M	1240 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1490 M	577 M	533 M	10800 M	1740 M	2400 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		438 M	193 M	178 M	3240 M	561 M	701 M
Benzo(a)pyrene	<15 µg/kg	TM218		860 M	341 M	298 M	6770 M	1010 M	1380 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		596 M	219 M	245 M	5220 M	840 M	1150 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		150 M	49.5 M	60.3 M	284 M	211 M	275 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		534 M	258 M	230 M	4100 M	865 M	1140 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		15200	4500	4760	118000	13700	19300

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.3	95.7	90.2	93.1	86.4	94.5
Acenaphthene-d10 % recovery**	%	TM218		97.7	90.9	94.3	96.5	83.1	87.6
Phenanthrene-d10 % recovery**	%	TM218		99.8	83.7	90.7	98.7	83.1	87.6
Chrysene-d12 % recovery**	%	TM218		83.6	80.1	77.5	79.8	76.4	79
Perylene-d12 % recovery**	%	TM218		77.3	82.2	71.1	80.5	77.1	66.6
Naphthalene	<9 µg/kg	TM218		9190 M	2100 M	1340 M	4760 M	514 M	439 M
Acenaphthylene	<12 µg/kg	TM218		9760 M	291 M	293 M	1380 M	319 M	145 M
Acenaphthene	<8 µg/kg	TM218		623 M	55.2 M	58.9 M	155 M	30.6 M	32.6 M
Fluorene	<10 µg/kg	TM218		11300 M	157 M	161 M	869 M	151 M	130 M
Phenanthrene	<15 µg/kg	TM218		34300 M	843 M	1350 M	5110 M	1460 M	1120 M
Anthracene	<16 µg/kg	TM218		16800 M	296 M	388 M	2210 M	408 M	302 M
Fluoranthene	<17 µg/kg	TM218		34300 M	2060 M	2780 M	8730 M	2990 M	1800 M
Pyrene	<15 µg/kg	TM218		22800 M	1640 M	2210 M	8290 M	2230 M	1460 M
Benz(a)anthracene	<14 µg/kg	TM218		13300 M	1510 M	1470 M	3790 M	1360 M	955 M
Chrysene	<10 µg/kg	TM218		12100 M	1460 M	1300 M	3830 M	1360 M	1020 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		15500 M	2480 M	2820 M	5390 M	2230 M	1420 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		4020 M	773 M	810 M	1810 M	691 M	390 M
Benzo(a)pyrene	<15 µg/kg	TM218		9200 M	1680 M	1630 M	3110 M	1280 M	786 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		6840 M	1490 M	1410 M	2070 M	1130 M	654 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		389 M	257 M	315 M	423 M	175 M	162 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		5040 M	1350 M	1410 M	2260 M	1030 M	690 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		206000	18400	19800	54200	17400	11500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.3	94.1	92.4	93.4	93.1	94.4
Acenaphthene-d10 % recovery**	%	TM218		94.9	94.7	95.2	95.8	93.2	94
Phenanthrene-d10 % recovery**	%	TM218		95.5	95.3	92.6	97.2	94	94
Chrysene-d12 % recovery**	%	TM218		77.9	74.2	82.1	80.4	80.3	79.7
Perylene-d12 % recovery**	%	TM218		75.5	71	85	81	80.9	79.6
Naphthalene	<9 µg/kg	TM218		12200 M	522 M	1670 #	201 M	822 #	156 M
Acenaphthylene	<12 µg/kg	TM218		13200 M	219 M	3210 #	96.7 M	561 #	70.2 M
Acenaphthene	<8 µg/kg	TM218		822 M	48.8 M	565 #	23.9 M	43.4 #	19.9 M
Fluorene	<10 µg/kg	TM218		5120 M	177 M	5910 #	58.4 M	531 #	50.1 M
Phenanthrene	<15 µg/kg	TM218		52400 M	1540 M	25100 #	463 M	2450 #	295 M
Anthracene	<16 µg/kg	TM218		18500 M	392 M	10500 #	134 M	1590 #	123 M
Fluoranthene	<17 µg/kg	TM218		112000 M	2580 M	30900 #	942 M	4010 #	604 M
Pyrene	<15 µg/kg	TM218		82800 M	2070 M	18600 #	789 M	2960 #	478 M
Benz(a)anthracene	<14 µg/kg	TM218		51900 M	1420 M	9360 #	540 M	1490 #	303 M
Chrysene	<10 µg/kg	TM218		49000 M	1520 M	7280 #	595 M	1240 #	293 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		78500 M	2590 M	9440 #	957 M	1930 #	524 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		23300 M	545 M	3560 #	315 M	636 #	143 M
Benzo(a)pyrene	<15 µg/kg	TM218		45800 M	1440 M	6110 #	575 M	1120 #	290 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		44300 M	1320 M	4080 #	437 M	814 #	253 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		7770 M	310 M	774 #	87.5 M	195 #	49.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		38300 M	1370 M	3220 #	500 M	722 #	254 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		636000	18100	140000	6710	21100	3910

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		77.9	41 4	76.3	74.3	76.2	93.9
Aliphatics >C5-C6	<10 µg/kg	TM089		18.7	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		31.6	<10 4	10.4	25.5	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		58.5	<10 4	36	37.1	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		25600	3300	1430	2260	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		756000	184000	101000	217000	<1000	2660
Aliphatics >C21-C35	<1000 µg/kg	TM414		154000	50000	9470	46300	3910	20200
Aliphatics >C35-C44	<1000 µg/kg	TM414		2350	<1000	<1000	<1000	<1000	4150
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		938000	238000	113000	266000	<5000	27200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		1190000	596000	293000	522000	<10000	51800
Aromatics >EC5-EC7	<10 µg/kg	TM089		28.1	<10 4	39.4	13.9	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		38.6	<10 4	24.4	24.4	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		9890	4920	5620	4580	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9730	10800	6920	10500	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		31900	49100	71500	50400	1250	2590
Aromatics > EC21-EC35	<1000 µg/kg	TM414		168000	255000	78500	157000	3150	19400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		28400	38000	18000	33900	<1000	2600
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5120	6860	2730	6920	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		248000	358000	180000	256000	5450	24600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		1190000	596000	293000	522000	<10000	51800
Total Aliphatics >C5-C10	<50 µg/kg	TM089		109	<50 4	<50	62.6	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		66.7	<50 4	63.8	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		176	<20 4	63.8	62.6	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		75.3	83.9	84.2	104	89.3	63.5 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	16.5	<10	<10	<10	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	10000	<1000	1000	3640
Aliphatics >C21-C35	<1000 µg/kg	TM414		18400	3410	29900	4580	8670	8940
Aliphatics >C35-C44	<1000 µg/kg	TM414		2090	<1000	4090	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		22000	<5000	44300	<5000	10400	13500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		48200	36500	82100	<10000	25300	24900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	10.6	<10	<10	<10	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2090	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6150	7850	5720	<1000	2630	1200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		16500	21800	28900	1950	10900	8960
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1450	2040	2180	<1000	1040	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		26200	32700	37800	<5000	14900	11400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		48200	32700	82100	<10000	25300	24900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		30.1 4	80.4	73.5	35.3	97.6	76.9
Aliphatics >C5-C6	<10 µg/kg	TM089		15 4	<10	<10	13	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		77.1 4	<10	<10	37.8	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		87.4 4	<10	<10	53.1	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		2390	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		11400	2030	<1000	9280	1920	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		27500	10200	4050	22400	8090	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		72900	60700	14300	70600	51300	6090
Aliphatics >C35-C44	<1000 µg/kg	TM414		28300	21700	<1000	15700	16600	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		142000	94700	19100	119000	78000	7250
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		233000	157000	90700	240000	139000	57900
Aromatics >EC5-EC7	<10 µg/kg	TM089		24.2 4	<10	<10	28.3	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		26.5 4	<10	<10	28.3	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		58.7 4	<10	<10	35.4	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1870	<1000	<1000	1360	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8670	<1000	<1000	4890	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		22600	7560	2710	29000	8470	1690
Aromatics > EC21-EC35	<1000 µg/kg	TM414		53600	48000	46700	78200	46900	32700
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3360	5950	22000	7870	5160	16200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1740	1190	<1000	4860
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		90100	62000	71600	121000	61300	50700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		233000	157000	90700	240000	139000	57900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		179 4	<50	<50	104	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		109 4	<50	<50	92	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		289 4	<20	<20	196	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		37.3 4	61.2 4	99.6	87.4	98.4	84.6
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	1120	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1070	2080	<1000	5430	<1000	6960
Aliphatics >C21-C35	<1000 µg/kg	TM414		6940	15400	12700	40400	10700	42600
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	2220	3120	3960	2720	9790
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		8870	21400	16600	50000	14000	60400
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		32100	54500	34700	88700	41000	96100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1280	3480	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4390	5450	1250	3390	4600	2110
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17300	23900	13500	28700	15100	28300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	2570	3380	5290	3850	4800
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1170	<1000	1880
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23300	33100	18100	38600	27000	35800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		32100	54500	34700	88700	41000	96100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99.9	115	73.8	79.5	84.7	96.7
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	12.5	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	17.6	<10	<10	51.3	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	28.1	<10	<10	73	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1190	<1000	1780	13200	13800	1710
Aliphatics >C16-C21	<1000 µg/kg	TM414		11900	16100	14000	119000	369000	12100
Aliphatics >C21-C35	<1000 µg/kg	TM414		61300	46900	57700	142000	147000	95700
Aliphatics >C35-C44	<1000 µg/kg	TM414		27600	11400	21800	40800	15300	54400
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		102000	75100	95200	314000	546000	164000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		142000	117000	136000	379000	1680000	312000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	18.7	<10	<10	49	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	5600	2950	4340	14800	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1510	55600	1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		5390	3270	6880	13000	436000	24900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		30400	27000	29000	42200	557000	105000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3510	6220	1980	3490	71400	16200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1200	<1000	<1000	14700	3740
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		39800	42100	41100	64500	1140000	148000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		142000	117000	136000	379000	1680000	312000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	137	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	137	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86.6	102	83.8	58 4	19.1 4	100
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	15.2 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	13.4	<10	<10 4	62 4	16.8
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	30.5	<10	<10 4	39.8 4	20.2
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1130	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	5880	5580	<1000	4200	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		28800	42800	91800	<1000	13800	3880
Aliphatics >C21-C35	<1000 µg/kg	TM414		61000	99800	93700	10700	22700	24200
Aliphatics >C35-C44	<1000 µg/kg	TM414		17100	38100	31300	1560	3750	4960
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		108000	187000	222000	13300	45600	33500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		136000	254000	298000	86400	91900	69900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	20.7	<10	<10 4	26.9 4	13.4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		4610	7920	2820	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1550	1030	<1000	5150	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2960	10900	17500	18500	11600	6500
Aromatics > EC21-EC35	<1000 µg/kg	TM414		19400	44300	48300	48300	27100	27600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1110	2270	6230	5000	1820	1650
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		28100	67000	75900	73100	46300	36400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		136000	254000	298000	86400	92000	70000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	117 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	117 4	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		14.7 4	104	118	99.3	94.3	88.5
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10	<10	39.8	20.9
Aliphatics >C6-C8	<10 µg/kg	TM089		41.5 4	27.6	37.2	<10	101	82.4
Aliphatics >C8-C10	<10 µg/kg	TM089		26.8 4	28.8	57.6	14.7	453	128
Aliphatics >C10-C12	<1000 µg/kg	TM414		2010	<1000	<1000	<1000	16900	7100
Aliphatics >C12-C16	<1000 µg/kg	TM414		6100	<1000	<1000	2910	50700	25100
Aliphatics >C16-C21	<1000 µg/kg	TM414		16400	<1000	<1000	29800	56900	60800
Aliphatics >C21-C35	<1000 µg/kg	TM414		29900	9550	5260	15100	71600	37600
Aliphatics >C35-C44	<1000 µg/kg	TM414		6330	2060	1560	4640	9010	5780
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		60800	12700	7220	52400	205000	136000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		122000	22300	16100	1520000	372000	232000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	23.4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	14	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		17.1 4	19.6	38.4	10.2	302	84.7
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1250	<1000	<1000	9410	10100	4400
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8900	<1000	<1000	160000	36900	11600
Aromatics > EC16-EC21	<1000 µg/kg	TM414		15500	1400	1440	526000	27800	15100
Aromatics > EC21-EC35	<1000 µg/kg	TM414		34300	7170	6470	664000	75900	55900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1370	<1000	<1000	113000	16200	8930
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	15900	4530	2210
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		61400	9630	8910	1470000	167000	96000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		122000	22400	16300	1520000	373000	233000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		68.3 4	56.4	94.8	<50	593	231
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50	<50	339	84.7
GRO >C5-C10	<20 µg/kg	TM089		68.3 4	56.4	94.8	<20	932	316

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78.5	98.2	79.4	78.1	48.1 4	35 4
Aliphatics >C5-C6	<10 µg/kg	TM089		12.8	22.5	19.2	23.5	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		24.4	69.7	28.3	45.9	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		30.2	279	87	73.9	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	28300	2910	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		13100	82600	22400	32600	1490	2090
Aliphatics >C16-C21	<1000 µg/kg	TM414		73900	84100	67000	447000	10600	12900
Aliphatics >C21-C35	<1000 µg/kg	TM414		31800	81900	44900	220000	27200	26000
Aliphatics >C35-C44	<1000 µg/kg	TM414		4710	9070	7750	30400	7180	3980
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		124000	286000	145000	730000	46400	45000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		1150000	462000	281000	960000	160000	178000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	12.9	22.6	11.2	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	11.3	15.7	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		20.9	185	58.8	49.3	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		15300	14000	4910	5850	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		84700	50000	8980	10700	3880	4650
Aromatics > EC16-EC21	<1000 µg/kg	TM414		345000	35200	31300	71400	21600	26900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		499000	57100	79700	116000	79700	91500
Aromatics >EC35-EC44	<1000 µg/kg	TM414		79300	20200	11500	25900	7370	9770
Aromatics > EC40-EC44	<1000 µg/kg	TM414		13300	6830	2810	8370	<1000	1220
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		1020000	176000	136000	230000	113000	133000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		1150000	463000	282000	961000	160000	178000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		67.3	371	134	143	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	198	92.7	76.2	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		67.3	569	227	220	<20 4	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		48.7 4	16.2 4	82.8	91.4	73.5	76
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	33 4	<10	<10	11.4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		21.1 4	155 4	13.3	17	18.2	12.3
Aliphatics >C8-C10	<10 µg/kg	TM089		26.6 4	117 4	34.4	35	41	22.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1930	<1000	5590	2360	3550	1460
Aliphatics >C16-C21	<1000 µg/kg	TM414		12400	11100	9960	4870	11200	3720
Aliphatics >C21-C35	<1000 µg/kg	TM414		38000	25700	95300	27700	35400	18000
Aliphatics >C35-C44	<1000 µg/kg	TM414		10400	5070	97000	13900	30300	6520
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		62800	42800	208000	48800	80600	29900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		356000	114000	340000	100000	290000	76600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	14.2 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		17.8 4	77.9 4	22.2	23.7	27.4	15.7
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2350	<1000	1020	<1000	4930	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9060	2780	13000	<1000	9740	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		80800	14000	27200	5480	63700	5040
Aromatics > EC21-EC35	<1000 µg/kg	TM414		184000	48800	86800	42100	120000	34000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		17400	4700	3700	3260	10800	7380
Aromatics > EC40-EC44	<1000 µg/kg	TM414		2400	1570	<1000	1240	2840	1300
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		294000	70800	132000	51400	210000	46800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		356000	114000	340000	100000	290000	76700
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	304 4	<50	52	70.7	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	92 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	396 4	<20	52	70.7	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	101	110	102	109	109
Toluene-d8**	%	TM116		92.8	89.6	93.7	91.9	94.6	95.3
4-Bromofluorobenzene**	%	TM116		96.6	84.6	101	90.9	101	103
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		478 M	561 M	545 M	397 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Dibromofluoromethane**	%	TM116		111	108	106	109	108	105
Toluene-d8**	%	TM116		95.6	94	95.4	95.5	92.1	95.9
4-Bromofluorobenzene**	%	TM116		102	99.4	101	106	97.2	94.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Dibromofluoromethane**	%	TM116		97.3	105	109	93.5	110	110
Toluene-d8**	%	TM116		93.2	98.6	99.1	96.1	95.7	96.5
4-Bromofluorobenzene**	%	TM116		77.3	95.7	90.6	79.7	103	93
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	179 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	406 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	104	111	107	105	107
Toluene-d8**	%	TM116		93.2	92.3	95.3	99.6	98.4	99.9
4-Bromofluorobenzene**	%	TM116		92.9	88.6	103	95.1	96.7	97.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	108	106	106	98.3	106
Toluene-d8**	%	TM116		93.8	94.1	101	99.6	93.9	94.8
4-Bromofluorobenzene**	%	TM116		105	102	94.9	93.1	82.2	106
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	489 M	1890 M	491 M	1760 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	107	103	116	93.1	106
Toluene-d8**	%	TM116		98.3	97.6	97.9	94.7	86.6	95.5
4-Bromofluorobenzene**	%	TM116		92.1	97.3	93.9	101	74.1	103
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		517 M	583 M	376 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Dibromofluoromethane**	%	TM116		96.4	104	107	110	106	106
Toluene-d8**	%	TM116		83.3	92.6	97.5	95.7	93.7	92.6
4-Bromofluorobenzene**	%	TM116		70.9	91.2	92.5	105	96.9	94.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		350 M	<260 M	<260 M	<260 M	619 M	569 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	107	113	106	107	110
Toluene-d8**	%	TM116		99.5	94.4	94.4	100	92.4	91.4
4-Bromofluorobenzene**	%	TM116		97	93.6	95	91.7	87.6	86.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		581 M	386 M	381 M	43000 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	104	108	106	108	110
Toluene-d8**	%	TM116		93.6	97.1	93.8	97.9	97.5	94.8
4-Bromofluorobenzene**	%	TM116		94.7	84	100	89.1	87.7	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 #	<200 M	<200 #	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 #	<180 M	<180 #	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 #	<140 M	<140 #	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 #	<80 M	<80 #	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 #	<200 M	<200 #	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	621 #	<260 M	1560 #	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748251 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747887 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748172 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748241 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLB-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747877 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLB-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748025 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747902 TM048	25/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747914 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-5 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747924 TM048	25/02/2021	Paul Poynton	Loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W129-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748130 TM048	26/02/2021	Marcin Magdziarek	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W131-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747982 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W131-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748000 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748017 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748046 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748060 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-7 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748072 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-9 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748084 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748094 TM048	25/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748115 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W208-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748200 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747937 TM048	25/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747954 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747966 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209B-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748142 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209B-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748156 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209C-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748167 TM048	25/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W209C-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748183 TM048	01/03/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748172 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747902 TM304	None (#)	N/a	<0.001 (#)	<0.001 (#)	0.0015 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-5 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747924 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W129-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748130 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748060 TM304	PCM analysis detected fibres typical of amphibole asbestos. (#)	N/A	0.0349 (#)	0.0038 (#)	0.0387 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748094 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747966 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209C-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748183 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Life Sciences Ltd Hawarden (Method codes TM) or ALS Life Sciences Ltd Aberdeen (Method codes S).

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Test Completion Dates

Lab Sample No(s)	23748251	23747881	23747887	23747896	23748172	23748234	23748241	23748245	23747877	23747944
Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		26-Feb-2021		26-Feb-2021		26-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full					05-Mar-2021					
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021
GRO by GC-FID (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	25-Feb-2021	03-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021
PAH by GCMS	25-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	26-Feb-2021
pH	22-Feb-2021	19-Feb-2021	23-Feb-2021	19-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021
Sample description	19-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23748025	23748100	23747902	23747909	23747914	23747921	23747924	23747930	23748130	23748135
Customer Sample Ref.	SPLB-3	SPLB-4	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6	W129-1	W129-2
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	26-Feb-2021		25-Feb-2021		25-Feb-2021		25-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full			09-Mar-2021				05-Mar-2021		08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	24-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
EPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021
PAH by GCMS	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	23-Feb-2021	22-Feb-2021	23-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Sample description	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23747982	23747988	23748000	23748009	23748017	23748032	23748046	23748052	23748060	23748067
Customer Sample Ref.	W131-1	W131-2	W131-3	W131-4	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	26-Feb-2021		26-Feb-2021		25-Feb-2021		26-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full									08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	26-Feb-2021	26-Feb-2021	22-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	25-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
Metals in solid samples by OES	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021
PAH by GCMS	01-Mar-2021	25-Feb-2021	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	26-Feb-2021	23-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Lab Sample No(s)	23748072	23748077	23748084	23748094	23748105	23748115	23748120	23748200	23748230	23747937
Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3	W206-4	W208-1	W208-2	W209-1
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		25-Feb-2021	25-Feb-2021		26-Feb-2021		26-Feb-2021		25-Feb-2021
Asbestos Quantification - Full				08-Mar-2021						
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	22-Feb-2021	23-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	08-Mar-2021	01-Mar-2021	06-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021
PAH by GCMS	01-Mar-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	26-Feb-2021	23-Feb-2021	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23747950	23747954	23747961	23747966	23747973	23748089	23748142	23748146	23748156	23748161
Customer Sample Ref.	W209-2	W209-3	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2	W209B-3	W209B-4
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	23-Feb-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021
Asbestos ID in Solid Samples		25-Feb-2021		26-Feb-2021			25-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full				05-Mar-2021						
Cyanide Comp/Free/Total/Thiocyanate	22-Feb-2021	01-Mar-2021	01-Mar-2021	22-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	01-Mar-2021	08-Mar-2021	25-Feb-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
PAH by GCMS	26-Feb-2021	26-Feb-2021	25-Feb-2021	24-Feb-2021	26-Feb-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	23-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	23-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021
TPH CWG GC (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23748167	23748178	23748183	23748191
Customer Sample Ref.	W209C-1	W209C-2	W209C-3	W209C-4
AGS Ref.				
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		01-Mar-2021	
Asbestos Quantification - Full			08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	02-Mar-2021	02-Mar-2021	25-Feb-2021
PAH by GCMS	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	24-Feb-2021	23-Feb-2021	25-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Final Report

Report No.:	21-21180-1
Initial Date of Issue:	29-Jun-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	David McCarroll Chris Wilson
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	.
No. of Samples:	3
Turnaround (Wkdays):	5
Date Approved:	29-Jun-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	22-Jun-2021
Date Instructed:	22-Jun-2021
Results Due:	28-Jun-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180	21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225698	1225700
Order No.: .			Client Sample Ref.:		R-CSP-1	R-CSP-2
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		18-Jun-2021	18-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Moisture	N	2030	%	0.020	2.2	2.2
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel
pH	M	2010		4.0	11.2	11.6
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.78	0.93
Iron (Total)	N	2430	mg/kg	100	13000	16000
Arsenic	M	2450	mg/kg	1.0	8.8	13
Cadmium	M	2450	mg/kg	0.10	0.25	0.40
Chromium	M	2450	mg/kg	1.0	62	66
Manganese	M	2450	mg/kg	5.0	2900	3200
Copper	M	2450	mg/kg	0.50	6.3	8.5
Mercury	M	2450	mg/kg	0.10	< 0.10	0.11
Nickel	M	2450	mg/kg	0.50	11	12
Lead	M	2450	mg/kg	0.50	35	55
Selenium	M	2450	mg/kg	0.20	0.67	< 0.20
Vanadium	U	2450	mg/kg	5.0	65	92
Zinc	M	2450	mg/kg	0.50	110	160
Organic Matter	M	2625	%	0.40	1.7	3.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	54	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	54	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	180	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	180	< 5.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			21-21180	21-21180
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1225698	1225700
Order No.: .		Client Sample Ref.:			R-CSP-1	R-CSP-2
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.2	0.2
		Bottom Depth (m):			0.2	0.2
		Date Sampled:			18-Jun-2021	18-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	230	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.23	0.31
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.16
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.63	0.91
Anthracene	M	2800	mg/kg	0.10	0.15	0.26
Fluoranthene	M	2800	mg/kg	0.10	1.4	1.9
Pyrene	M	2800	mg/kg	0.10	1.0	1.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.60	0.85
Chrysene	M	2800	mg/kg	0.10	0.55	0.84
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.84	1.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.48	0.42
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.56	0.79
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.61	0.34
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.49	0.37
Total Of 16 PAH's	N	2800	mg/kg	2.0	7.6	9.6
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.3
Electrical Conductivity	U	1020	µS/cm	1.0	790
Suspended Solids At 105C	U	1030	mg/l	5.0	66
Total Dissolved Solids	N	1020	mg/l	1.0	510
Turbidity	N	1060	NTU	1.0	86
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	7.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	40
Dissolved Oxygen	N	1150	mg O2/l	0.50	8.0
Redox Potential	N	1170	mV	N/A	38
Chloride	U	1220	mg/l	1.0	60
Fluoride	U	1220	mg/l	0.050	0.62
Ammoniacal Nitrogen	U	1220	mg/l	0.050	1.7
Phosphorus (Total)	N	1220	mg/l	0.020	0.040
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.039
Sulphur	N	1220	mg/l	1.0	47
Sulphate	U	1220	mg/l	1.0	140
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	74
Magnesium	U	1455	mg/l	0.20	12
Total Calcium	N	1455	mg/l	5.0	75
Total Magnesium	N	1455	mg/l	0.50	13
Total Hardness as CaCO3	U	1270	mg/l	15	240
Arsenic (Dissolved)	U	1455	µg/l	0.20	3.6
Boron (Dissolved)	U	1455	µg/l	10.0	150
Barium (Dissolved)	U	1455	µg/l	5.00	78
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	5.8
Copper (Dissolved)	U	1455	µg/l	0.50	2.4
Iron (Dissolved)	N	1455	µg/l	5.0	11
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	260
Nickel (Dissolved)	U	1455	µg/l	0.50	14
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	1.2
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.6
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5
Arsenic (Total)	N	1455	µg/l	0.20	3.4
Boron (Total)	N	1455	µg/l	10.0	160
Barium (Total)	N	1455	µg/l	5.00	79
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	5.7
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	11
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	260
Nickel (Total)	N	1455	µg/l	0.50	14
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	< 0.50
Selenium (Total)	N	1455	µg/l	0.50	0.84
Vanadium (Total)	N	1455	µg/l	0.50	6.6
Zinc (Total)	N	1455	µg/l	2.5	< 2.5
Chromium (Hexavalent)	U	1490	µg/l	20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	9.3
Total Inorganic Carbon	N	1220	mg/l	2.5	43
Total Organic Carbon	U	1610	mg/l	2.0	9.2
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-26393-1
Initial Date of Issue:	12-Aug-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	.
No. of Samples:	3
Turnaround (Wkdays):	5
Date Approved:	06-Aug-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	02-Aug-2021
Date Instructed:	02-Aug-2021
Results Due:	06-Aug-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			21-26393	21-26393
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1251520	1251521
Order No.: .		Client Sample Ref.:			R-CSP-3	R-CSP-4
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.2	0.2
		Bottom Depth (m):			0.2	0.2
		Date Sampled:			29-Jul-2021	29-Jul-2021
		Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.5	7.8
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	10.1	11.1
Cyanide (Total)	M	2300	mg/kg	0.50	1.4	1.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.75	20
Iron (Total)	N	2430	mg/kg	100	25000	23000
Arsenic	M	2450	mg/kg	1.0	19	15
Cadmium	M	2450	mg/kg	0.10	1.1	1.4
Chromium	M	2450	mg/kg	1.0	90	260
Manganese	M	2450	mg/kg	5.0	6000	11000
Copper	M	2450	mg/kg	0.50	70	130
Mercury	M	2450	mg/kg	0.10	0.46	0.34
Nickel	M	2450	mg/kg	0.50	28	22
Lead	M	2450	mg/kg	0.50	170	230
Selenium	M	2450	mg/kg	0.20	0.51	0.53
Vanadium	U	2450	mg/kg	5.0	120	230
Zinc	M	2450	mg/kg	0.50	530	640
Organic Matter	M	2625	%	0.40	5.2	3.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393	21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251520	1251521
Order No.: .			Client Sample Ref.:		R-CSP-3	R-CSP-4
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		29-Jul-2021	29-Jul-2021
			Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.9	1.0
Anthracene	M	2800	mg/kg	0.10	0.43	0.22
Fluoranthene	M	2800	mg/kg	0.10	3.3	1.7
Pyrene	M	2800	mg/kg	0.10	2.8	1.5
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.6	0.78
Chrysene	M	2800	mg/kg	0.10	2.0	1.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.8	1.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.91	0.45
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.5	0.77
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.5	0.89
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.26	0.15
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.5	0.93
Total Of 16 PAH's	N	2800	mg/kg	2.0	21	11
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.1
Electrical Conductivity	U	1020	µS/cm	1.0	860
Suspended Solids At 105C	U	1030	mg/l	5.0	19
Total Dissolved Solids	N	1020	mg/l	1.0	560
Turbidity	N	1060	NTU	1.0	44
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	25
Dissolved Oxygen	N	1150	mg O2/l	0.50	8.0
Redox Potential	N	1170	mV	N/A	56
Chloride	U	1220	mg/l	1.0	70
Fluoride	U	1220	mg/l	0.050	0.39
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.34
Phosphorus (Total)	N	1220	mg/l	0.020	0.021
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.021
Sulphur	N	1220	mg/l	1.0	22
Sulphate	U	1220	mg/l	1.0	67
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050
Calcium	U	1455	mg/l	2.00	35
Magnesium	U	1455	mg/l	0.20	8.1
Total Calcium	N	1455	mg/l	5.0	36
Total Magnesium	N	1455	mg/l	0.50	8.6
Total Hardness as CaCO3	U	1270	mg/l	15	120
Arsenic (Dissolved)	U	1455	µg/l	0.20	3.1
Boron (Dissolved)	U	1455	µg/l	10.0	120
Barium (Dissolved)	U	1455	µg/l	5.00	34
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	6.5
Copper (Dissolved)	U	1455	µg/l	0.50	2.3
Iron (Dissolved)	N	1455	µg/l	5.0	< 5.0
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	4.2
Nickel (Dissolved)	U	1455	µg/l	0.50	1.1
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	0.62
Vanadium (Dissolved)	U	1455	µg/l	0.50	7.6
Zinc (Dissolved)	U	1455	µg/l	2.5	4.9
Arsenic (Total)	N	1455	µg/l	0.20	3.1
Boron (Total)	N	1455	µg/l	10.0	120
Barium (Total)	N	1455	µg/l	5.00	35
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	6.8
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	< 5.0
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	4.5
Nickel (Total)	N	1455	µg/l	0.50	1.2
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	< 0.50
Selenium (Total)	N	1455	µg/l	0.50	0.62
Vanadium (Total)	N	1455	µg/l	0.50	7.7
Zinc (Total)	N	1455	µg/l	2.5	4.9
Chromium (Hexavalent)	U	1490	µg/l	20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	6.2
Total Inorganic Carbon	N	1220	mg/l	2.5	34
Total Organic Carbon	U	1610	mg/l	2.0	6.4
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1251519	D2-S			30-Jul-2021	B	Coloured Winchester 1000ml
1251519	D2-S			30-Jul-2021	B	EPA Vial 40ml
1251519	D2-S			30-Jul-2021	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	21-41336-1
Initial Date of Issue:	01-Dec-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll Elliot Thomas
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	31
Turnaround (Wkdays):	5
Date Approved:	01-Dec-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	24-Nov-2021
Date Instructed:	24-Nov-2021
Results Due:	30-Nov-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703	1326704
				Client Sample ID.:	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1	AT31-2
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5	1.8
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001										
Total Asbestos	U	2192	%	0.001										
Moisture	N	2030	%	0.020	9.4	13	17	10	8.4	7.7	24	16	9.6	8.2
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Brown	Brown	Black	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	10.3	10.7	10.3	10.5	11.8	11.5	10.2	10.3	10.2
Cyanide (Total)	M	2300	mg/kg	0.50	2.7	1.6	20	22	1.7	1.9	< 0.50	< 0.50	0.50	1.3
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	11	7.8	6.0	14	6.9	4.4	4.2	16	1.9	1.4
Iron (Total)	N	2430	mg/kg	100	24000	26000	26000	25000	26000	23000	20000	25000	26000	22000
Arsenic	M	2450	mg/kg	1.0	43	35	19	17	14	22	3.0	14	18	23
Cadmium	M	2450	mg/kg	0.10	0.69	0.40	0.36	1.3	0.25	0.84	< 0.10	0.79	0.33	0.24
Chromium	M	2450	mg/kg	1.0	110	110	130	79	74	590	44	63	49	82
Manganese	M	2450	mg/kg	5.0	12000	11000	6400	5400	5100	26000	1400	2500	4600	6100
Copper	M	2450	mg/kg	0.50	95	95	67	36	130	71	120	180	26	31
Mercury	M	2450	mg/kg	0.10	0.66	0.85	0.89	0.27	0.24	2.7	0.24	0.19	0.26	0.21
Nickel	M	2450	mg/kg	0.50	46	47	34	37	46	58	11	36	51	17
Lead	M	2450	mg/kg	0.50	140	140	310	150	61	52	20	72	87	140
Selenium	M	2450	mg/kg	0.20	< 0.20	0.28	0.33	0.39	< 0.20	< 0.20	0.63	0.54	0.23	< 0.20
Vanadium	U	2450	mg/kg	5.0	140	120	100	110	120	1400	94	100	46	82
Zinc	M	2450	mg/kg	0.50	200	160	160	300	150	91	27	140	150	180
Organic Matter	M	2625	%	0.40	24	59	64	17	98	2.8	100	47	40	21
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	36	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	88	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703	1326704
					Client Sample ID.:	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1	AT31-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5	1.8
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	150	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.8	3.2	< 0.10	< 0.10	0.67	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	0.66	0.67	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.24	0.28	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.32	0.52	< 0.10	< 0.10	0.47	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		0.71	2.5	4.1	3.8	1.1	< 0.10	5.7	1.4	0.84	0.48
Anthracene	M	2800	mg/kg	0.10		0.22	1.0	0.91	1.1	0.19	< 0.10	0.88	0.22	0.32	0.14
Fluoranthene	M	2800	mg/kg	0.10		1.1	4.1	6.4	6.6	2.0	0.98	3.1	1.2	1.9	0.68
Pyrene	M	2800	mg/kg	0.10		1.0	3.2	4.5	4.5	1.3	0.94	1.9	0.82	1.4	0.51
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.74	2.2	3.2	3.2	1.3	0.85	1.7	0.77	1.4	0.48
Chrysene	M	2800	mg/kg	0.10		0.70	2.5	3.4	2.8	1.3	1.0	2.0	0.90	1.6	0.65
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.7	4.1	5.2	4.8	1.3	1.7	1.9	1.1	3.1	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.49	1.1	1.4	1.4	0.73	0.77	0.60	0.38	0.87	0.27
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.85	2.8	2.8	3.1	1.2	1.4	1.0	0.72	2.1	0.81
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.72	2.9	2.8	2.4	1.0	1.0	< 0.10	< 0.10	2.1	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.22	0.43	1.1	0.83	0.24	< 0.10	< 0.10	< 0.10	0.48	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.91	1.9	2.5	2.3	0.84	0.78	< 0.10	< 0.10	1.6	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		9.4	29	41	42	13	9.4	20	7.5	18	5.0
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326705	1326706	1326707	1326708	1326709	1326710	1326711	1326712	1326713	1326714
				Client Sample ID.:	AS31-1	AS31-2	AR31-1	AR30-1	AQ31-1	AP31-1	AQ30-1	AQ30-2	AQ30-3	AO30-1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.6	1.7	0.3	0.5	1.0	0.3	0.5	1.7	2.8	0.6
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		Fibres/Clumps		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Chrysotile		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001							<0.001			
Total Asbestos	U	2192	%	0.001							<0.001			
Moisture	N	2030	%	0.020	10	9.7	5.0	11	4.3	11	12	17	20	10
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	11.8	11.2	10.9	10.7	> 12.0	10.2	11.6	11.2	11.2	12.0
Cyanide (Total)	M	2300	mg/kg	0.50	2.4	3.4	< 0.50	< 0.50	< 0.50	< 0.50	4.5	2.4	< 0.50	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	0.74	0.75	< 0.50	0.56	< 0.50	< 0.50	0.61	1.5	< 0.50
Iron (Total)	N	2430	mg/kg	100	22000	23000	8900	7500	21000	19000	23000	23000	14000	23000
Arsenic	M	2450	mg/kg	1.0	26	22	55	15	43	19	25	22	12	17
Cadmium	M	2450	mg/kg	0.10	0.15	0.38	0.82	< 0.10	< 0.10	< 0.10	0.59	1.1	2.5	0.15
Chromium	M	2450	mg/kg	1.0	670	120	10	19	1200	67	410	570	86	340
Manganese	M	2450	mg/kg	5.0	28000	7300	1800	3100	35000	4300	18000	11000	2300	13000
Copper	M	2450	mg/kg	0.50	130	51	76	23	290	60	51	73	34	50
Mercury	M	2450	mg/kg	0.10	4.3	0.53	< 0.10	< 0.10	1.9	0.14	1.4	0.85	0.24	0.89
Nickel	M	2450	mg/kg	0.50	35	25	10	8.3	26	9.9	32	150	15	16
Lead	M	2450	mg/kg	0.50	43	65	21	7.5	80	23	78	110	160	38
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	1200	220	24	23	800	95	390	250	82	300
Zinc	M	2450	mg/kg	0.50	77	83	60	24	82	45	110	120	190	86
Organic Matter	M	2625	%	0.40	9.0	11	2.2	0.69	2.8	1.2	9.0	29	59	33
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	1200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	230	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	1400	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	230	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	210	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326705	1326706	1326707	1326708	1326709	1326710	1326711	1326712	1326713	1326714
					Client Sample ID.:	AS31-1	AS31-2	AR31-1	AR30-1	AQ31-1	AP31-1	AQ30-1	AQ30-2	AQ30-3	AO30-1
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.6	1.7	0.3	0.5	1.0	0.3	0.5	1.7	2.8	0.6
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		19	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	210	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		1400	< 10	< 10	< 10	< 10	< 10	440	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		< 0.10	3.1	< 0.10	1.6	0.24	0.34	< 0.10	1.6	1.4	1.9
Anthracene	M	2800	mg/kg	0.10		< 0.10	0.83	< 0.10	0.93	0.20	0.12	< 0.10	0.27	0.41	0.39
Fluoranthene	M	2800	mg/kg	0.10		0.77	6.1	< 0.10	3.2	0.47	0.90	1.3	2.2	1.8	2.2
Pyrene	M	2800	mg/kg	0.10		0.75	4.6	< 0.10	2.4	0.21	1.2	1.5	1.7	1.6	1.6
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.70	2.5	< 0.10	1.1	0.23	0.91	0.97	1.1	1.1	0.84
Chrysene	M	2800	mg/kg	0.10		0.68	1.7	< 0.10	1.0	0.40	1.0	1.1	1.3	0.99	1.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.2	1.9	< 0.10	1.1	0.24	2.4	2.2	1.8	1.4	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.49	0.50	< 0.10	0.37	0.17	0.61	0.66	0.58	0.47	0.58
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.0	1.3	< 0.10	0.97	0.27	1.3	1.3	1.2	0.82	0.98
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.37	1.4	< 0.10	1.1	0.43	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.42	0.34	< 0.10	0.30	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.38	1.2	< 0.10	0.99	0.58	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		5.6	23	< 2.0	13	3.6	12	9.0	14	11	11
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326715	1326716	1326717	1326718	1326719	1326720	1326721	1326722	1326723	1326724
				Client Sample ID.:	AN31-1	AN30-1	AM31-1	AM30-1	AM29-1	AL28-1	AT26-1	AT26-2	W208-3-1	W208-3-2
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.3	1.0	1.1	0.4	1.2	0.2	1.0	1.4	0.2	0.2
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001										
Total Asbestos	U	2192	%	0.001										
Moisture	N	2030	%	0.020	9.0	8.7	8.9	3.6	12	4.1	11	9.4	11	8.0
Soil Colour	N	2040		N/A	Black	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	11.1	11.9	> 12.0	> 12.0	> 12.0	> 12.0	11.0	11.0	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	3.6	0.50	0.70	3.9	1.5	0.90	1.1	< 0.50	0.80	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.70	< 0.50	< 0.50	1.0	< 0.50	< 0.50	< 0.50	1.2	1.1	27
Iron (Total)	N	2430	mg/kg	100	23000	22000	21000	21000	22000	21000	22000	22000	20000	21000
Arsenic	M	2450	mg/kg	1.0	27	11	17	41	23	35	33	30	38	30
Cadmium	M	2450	mg/kg	0.10	0.34	0.29	< 0.10	0.40	< 0.10	< 0.10	0.10	0.74	0.66	0.55
Chromium	M	2450	mg/kg	1.0	410	26	200	1000	450	530	400	140	130	100
Manganese	M	2450	mg/kg	5.0	17000	2700	11000	39000	18000	33000	28000	5200	4600	6600
Copper	M	2450	mg/kg	0.50	39	55	18	81	61	34	94	140	230	140
Mercury	M	2450	mg/kg	0.10	1.3	0.18	0.50	2.7	1.2	1.2	0.93	0.41	0.43	0.40
Nickel	M	2450	mg/kg	0.50	21	11	10	28	17	46	51	34	34	28
Lead	M	2450	mg/kg	0.50	67	61	24	180	43	24	31	120	120	97
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	360	38	210	780	400	2200	2300	180	190	160
Zinc	M	2450	mg/kg	0.50	130	80	53	110	60	65	69	220	200	180
Organic Matter	M	2625	%	0.40	26	53	2.4	2.1	22	1.4	2.2	7.1	5.9	6.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	6.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	6.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.4	< 1.0	12
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	56	< 1.0	300
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326715	1326716	1326717	1326718	1326719	1326720	1326721	1326722	1326723	1326724
					Client Sample ID.:	AN31-1	AN30-1	AM31-1	AM30-1	AM29-1	AL28-1	AT26-1	AT26-2	W208-3-1	W208-3-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.3	1.0	1.1	0.4	1.2	0.2	1.0	1.4	0.2	0.2
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	63	< 5.0	310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	< 10	< 10	< 10	< 10	63	< 10	310
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.59	2.1	2.6
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.25	0.71	0.98
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	0.14	0.13	0.17
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	0.24	0.41	0.55
Phenanthrene	M	2800	mg/kg	0.10		0.59	1.2	< 0.10	0.38	< 0.10	2.0	3.7	1.2	3.3	4.1
Anthracene	M	2800	mg/kg	0.10		0.24	0.16	< 0.10	0.26	< 0.10	0.37	0.54	0.36	0.77	1.4
Fluoranthene	M	2800	mg/kg	0.10		1.5	0.76	0.84	0.74	0.83	2.7	5.7	2.3	5.4	6.9
Pyrene	M	2800	mg/kg	0.10		1.3	0.61	0.89	0.58	0.70	2.2	5.2	1.6	3.7	4.5
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.71	0.47	0.69	0.42	0.38	1.9	4.0	1.5	2.6	3.0
Chrysene	M	2800	mg/kg	0.10		0.99	0.55	0.77	0.55	0.52	2.1	3.5	1.6	2.6	3.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.5	0.55	1.1	0.48	1.0	3.1	5.8	2.5	3.3	4.2
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.26	0.26	0.50	0.18	0.31	1.3	2.1	0.61	1.5	1.5
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.95	0.44	0.93	0.13	0.70	2.3	4.6	1.4	2.0	3.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.75	< 0.10	< 0.10	< 0.10	< 0.10	2.2	4.1	1.3	2.4	2.9
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.28	< 0.10	< 0.10	< 0.10	< 0.10	0.42	0.64	0.43	0.41	0.59
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.73	< 0.10	< 0.10	< 0.10	< 0.10	2.0	3.7	1.3	1.6	1.9
Total Of 16 PAH's	N	2800	mg/kg	2.0		9.8	5.0	5.7	3.7	4.4	23	44	17	33	42
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.4
Electrical Conductivity	U	1020	µS/cm	1.0	970
Suspended Solids At 105C	U	1030	mg/l	5.0	< 5.0
Total Dissolved Solids	N	1020	mg/l	1.0	630
Turbidity	N	1060	NTU	1.0	4.4
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	[B] 30
Dissolved Oxygen	N	1150	mg O2/l	0.50	6.0
Redox Potential	N	1170	mV	N/A	130
Chloride	U	1220	mg/l	1.0	55
Fluoride	U	1220	mg/l	0.050	0.56
Ammoniacal Nitrogen	U	1220	mg/l	0.050	7.8
Phosphorus (Total)	N	1220	mg/l	0.020	0.037
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.036
Sulphur	N	1220	mg/l	1.0	83
Sulphate	U	1220	mg/l	1.0	250
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050
Calcium	U	1455	mg/l	2.00	71
Magnesium	U	1455	mg/l	0.20	16
Total Calcium	N	1455	mg/l	5.0	71
Total Magnesium	N	1455	mg/l	0.50	15
Total Hardness as CaCO3	U	1270	mg/l	15	240
Arsenic (Dissolved)	U	1455	µg/l	0.20	4.4
Boron (Dissolved)	U	1455	µg/l	10.0	390
Barium (Dissolved)	U	1455	µg/l	5.00	130
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	0.67
Copper (Dissolved)	U	1455	µg/l	0.50	2.3
Iron (Dissolved)	N	1455	µg/l	5.0	28
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	100
Nickel (Dissolved)	U	1455	µg/l	0.50	2.1
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.55
Selenium (Dissolved)	U	1455	µg/l	0.50	1.7
Vanadium (Dissolved)	U	1455	µg/l	0.50	14
Zinc (Dissolved)	U	1455	µg/l	2.5	3.4
Arsenic (Total)	N	1455	µg/l	0.20	4.4

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Boron (Total)	N	1455	µg/l	10.0	390
Barium (Total)	N	1455	µg/l	5.00	130
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	0.67
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	28
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	100
Nickel (Total)	N	1455	µg/l	0.50	2.1
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	0.55
Selenium (Total)	N	1455	µg/l	0.50	1.7
Vanadium (Total)	N	1455	µg/l	0.50	14
Zinc (Total)	N	1455	µg/l	2.5	3.4
Chromium (Hexavalent)	U	1490	µg/l	20	[B] < 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	8.0
Total Inorganic Carbon	N	1220	mg/l	2.5	46
Total Organic Carbon	U	1610	mg/l	2.0	8.5
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1326725		D2-S		19-Nov-2021	B	Coloured Winchester 1000ml
1326725		D2-S		19-Nov-2021	B	EPA Vial 40ml
1326725		D2-S		19-Nov-2021	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930

Test Methods

SOP	Title	Parameters included	Method summary
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-04545-1
Initial Date of Issue:	15-Feb-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	47
Turnaround (Wkdays):	7
Date Approved:	15-Feb-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Feb-2022
Date Instructed:	08-Feb-2022
Results Due:	16-Feb-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444
		Client Sample ID.:			3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	5.1	3.2	5.0	4.5	3.4	4.3	5.7	5.7	5.7
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	10.8	10.7	11.6	11.1	11.7	11.3	10.9	11.1
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.90	1.5	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.71	0.72	1.0	0.78	1.2	0.65	1.9	1.3	2.3
Iron (Total)	N	2430	mg/kg	100	240000	210000	220000	200000	210000	210000	190000	140000	150000
Arsenic	M	2450	mg/kg	1.0	19	17	19	18	18	19	21	16	19
Cadmium	M	2450	mg/kg	0.10	0.45	0.35	0.50	0.42	0.36	1.2	0.66	0.31	0.43
Chromium	M	2450	mg/kg	1.0	280	300	300	420	300	410	450	280	330
Manganese	M	2450	mg/kg	5.0	19000	19000	19000	31000	18000	29000	31000	20000	25000
Copper	M	2450	mg/kg	0.50	43	29	32	35	25	35	39	30	27
Mercury	M	2450	mg/kg	0.10	0.42	0.38	0.52	0.51	0.48	0.52	0.95	0.50	0.64
Nickel	M	2450	mg/kg	0.50	41	31	39	49	33	49	48	40	40
Lead	M	2450	mg/kg	0.50	66	58	75	87	59	110	110	61	84
Selenium	M	2450	mg/kg	0.20	0.22	< 0.20	< 0.20	0.31	< 0.20	< 0.20	< 0.20	0.36	0.22
Vanadium	U	2450	mg/kg	5.0	350	410	360	1700	360	1600	1700	1000	1300
Zinc	M	2450	mg/kg	0.50	110	97	110	110	100	110	120	99	110
Organic Matter	M	2625	%	0.40	5.0	1.0	2.8	3.5	4.7	2.1	6.6	6.9	5.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.5	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	29	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	5.9	20	< 1.0	16	< 1.0	43	51	41	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	230	200	90	290	< 1.0	250	250	280	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	240	220	90	310	< 5.0	300	340	320	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444
					Client Sample ID.:	3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		17	11	4.6	11	< 1.0	25	13	4.9	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		62	84	51	110	< 1.0	130	89	110	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		80	95	56	120	< 5.0	160	100	120	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		320	320	150	430	< 10	460	440	430	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	2.1	0.59	< 0.10	0.58	0.80	0.79	0.87
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	1.6	0.20	< 0.10	0.14	0.18	0.11	0.14
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.20	0.12	< 0.10	0.17	0.18	0.19	0.18
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.9	0.17	< 0.10	0.20	0.16	0.10	0.21
Phenanthrene	M	2800	mg/kg	0.10		2.5	1.7	27	4.0	2.3	4.7	2.1	1.4	1.7
Anthracene	M	2800	mg/kg	0.10		0.53	0.36	4.7	0.53	0.56	0.57	0.47	0.26	0.27
Fluoranthene	M	2800	mg/kg	0.10		3.5	2.4	34	5.4	2.8	5.3	5.0	2.4	2.8
Pyrene	M	2800	mg/kg	0.10		2.5	1.8	23	3.5	2.0	3.8	4.1	1.9	2.3
Benzo[a]anthracene	M	2800	mg/kg	0.10		1.4	1.2	12	3.2	1.3	3.2	3.5	1.3	1.8
Chrysene	M	2800	mg/kg	0.10		1.5	1.1	12	3.9	1.4	3.7	3.7	1.7	2.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		2.1	1.6	15	4.9	1.9	4.9	5.1	2.3	3.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.74	0.53	4.6	1.6	0.60	1.8	1.9	0.85	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.5	0.97	13	2.7	1.2	3.3	3.7	1.4	2.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		1.3	0.99	9.9	2.6	1.1	3.2	3.3	1.5	2.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.27	0.16	1.4	0.59	0.16	0.54	0.61	0.23	0.41
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		1.1	0.83	7.9	2.1	0.85	2.2	2.8	1.2	1.7
Total Of 16 PAH's	N	2800	mg/kg	2.0		19	14	170	36	16	38	38	18	23
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453
		Client Sample ID.:			3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:				NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-		-		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	6.1	6.7	5.4	5.3	5.6	6.1	5.1	5.0	6.0
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	11.2	10.2	10.5	9.3	10.3	10.5	9.9	11.0	10.1
Cyanide (Total)	M	2300	mg/kg	0.50	1.0	3.0	< 0.50	0.60	0.80	< 0.50	< 0.50	1.1	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.73	4.0	1.3	1.2	1.4	2.2	2.6	0.86	0.76
Iron (Total)	N	2430	mg/kg	100	180000	120000	51000	270000	230000	28000	31000	27000	32000
Arsenic	M	2450	mg/kg	1.0	18	18	22	17	20	19	12	9.9	17
Cadmium	M	2450	mg/kg	0.10	0.53	1.7	1.7	0.75	0.94	0.79	0.42	0.31	0.75
Chromium	M	2450	mg/kg	1.0	400	120	180	38	110	110	77	240	80
Manganese	M	2450	mg/kg	5.0	28000	5700	12000	6300	6800	6300	3300	17000	5800
Copper	M	2450	mg/kg	0.50	32	38	35	24	35	25	19	150	24
Mercury	M	2450	mg/kg	0.10	0.76	2.0	0.64	0.40	0.42	0.33	0.20	0.49	0.52
Nickel	M	2450	mg/kg	0.50	44	38	36	40	39	34	27	33	30
Lead	M	2450	mg/kg	0.50	97	280	290	110	150	99	73	81	150
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.39	< 0.20	0.22	0.37	0.69	0.36	0.58
Vanadium	U	2450	mg/kg	5.0	1500	170	250	60	130	140	100	890	120
Zinc	M	2450	mg/kg	0.50	110	530	560	190	380	150	140	94	200
Organic Matter	M	2625	%	0.40	3.3	12	7.9	9.5	8.5	6.9	6.2	13	1.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	440	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	440	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	26	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453
					Client Sample ID.:	3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	6.7	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	250	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	430	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	430	< 10	< 10	< 10	< 10	570	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		1.0	2.9	4.1	< 0.10	4.2	0.82	< 0.10	0.72	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		0.12	0.41	1.0	< 0.10	0.56	0.17	< 0.10	0.20	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		0.16	0.28	0.22	< 0.10	0.13	0.12	< 0.10	0.18	< 0.10
Fluorene	M	2800	mg/kg	0.10		0.10	0.36	0.84	< 0.10	0.33	0.27	< 0.10	0.15	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		2.0	2.1	6.0	0.56	1.8	1.4	0.91	3.6	0.46
Anthracene	M	2800	mg/kg	0.10		0.33	0.54	1.9	0.12	0.63	0.28	0.20	0.74	0.11
Fluoranthene	M	2800	mg/kg	0.10		3.7	3.1	9.4	0.29	3.1	1.7	1.3	6.0	0.65
Pyrene	M	2800	mg/kg	0.10		2.9	2.5	6.5	0.30	2.6	1.3	1.0	4.1	0.48
Benzo[a]anthracene	M	2800	mg/kg	0.10		2.2	2.1	4.3	0.18	2.3	0.86	0.65	4.0	0.33
Chrysene	M	2800	mg/kg	0.10		2.8	2.1	4.1	0.25	2.2	0.79	0.74	4.3	0.35
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		4.1	3.6	5.8	< 0.10	3.8	1.1	1.1	5.3	0.51
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		1.5	1.2	2.0	< 0.10	1.2	0.38	0.33	1.8	0.19
Benzo[a]pyrene	M	2800	mg/kg	0.10		2.9	2.8	4.2	< 0.10	2.8	0.84	0.80	3.4	0.37
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		2.8	2.6	3.7	< 0.10	2.3	0.71	< 0.10	3.2	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.53	0.41	0.53	< 0.10	0.42	0.13	< 0.10	0.77	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.3	2.0	2.8	< 0.10	1.8	0.64	< 0.10	2.4	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		29	29	57	< 2.0	30	12	7.0	41	3.5
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367454	1367455	1367456	1367457	1367458	1367459	1367460	1367461	1367462
		Client Sample ID.:			3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45	3CP46	3CP47
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	4.6	5.0	5.9	0.82	5.4	2.7	3.7	3.7	3.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.0	10.7	10.5	10.2	10.6	10.0	9.8	9.8
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	< 0.50	< 0.50	1.8	0.80	1.1	0.70	1.0	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.78	0.58	3.3	2.4	1.0	0.93	1.6	1.9	1.8
Iron (Total)	N	2430	mg/kg	100	33000	33000	30000	32000	32000	32000	34000	34000	30000
Arsenic	M	2450	mg/kg	1.0	17	25	24	14	13	12	18	16	17
Cadmium	M	2450	mg/kg	0.10	0.71	0.82	0.94	0.42	0.36	0.38	0.74	0.61	0.55
Chromium	M	2450	mg/kg	1.0	70	80	310	130	80	88	98	100	100
Manganese	M	2450	mg/kg	5.0	4400	6400	18000	10000	6800	6700	7400	5200	6500
Copper	M	2450	mg/kg	0.50	20	31	34	22	35	24	27	28	25
Mercury	M	2450	mg/kg	0.10	0.43	0.70	0.63	0.25	0.16	0.18	0.24	0.25	0.26
Nickel	M	2450	mg/kg	0.50	26	29	41	38	37	31	41	38	42
Lead	M	2450	mg/kg	0.50	120	170	140	150	220	210	160	160	150
Selenium	M	2450	mg/kg	0.20	0.48	0.66	0.32	< 0.20	0.45	0.47	< 0.20	0.27	0.21
Vanadium	U	2450	mg/kg	5.0	100	130	410	480	290	330	310	250	320
Zinc	M	2450	mg/kg	0.50	180	120	200	130	130	190	190	150	140
Organic Matter	M	2625	%	0.40	12	2.8	2.8	13	64	24	16	28	7.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367454	1367455	1367456	1367457	1367458	1367459	1367460	1367461	1367462
					Client Sample ID.:	3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45	3CP46	3CP47
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	41	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	57	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	< 10	< 10	< 10	57	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		1.5	< 0.10	1.9	1.2	2.1	1.6	1.2	2.1	1.4
Acenaphthylene	N	2800	mg/kg	0.10		0.20	< 0.10	0.43	0.13	0.16	0.21	0.21	0.22	0.22
Acenaphthene	M	2800	mg/kg	0.10		0.15	< 0.10	< 0.10	0.33	0.30	0.35	0.16	0.31	0.26
Fluorene	M	2800	mg/kg	0.10		0.26	< 0.10	0.20	0.18	0.24	0.26	0.21	0.31	0.27
Phenanthrene	M	2800	mg/kg	0.10		1.8	0.46	2.0	3.4	4.1	4.1	2.6	2.9	2.1
Anthracene	M	2800	mg/kg	0.10		0.32	0.12	0.50	0.41	0.59	0.88	0.59	0.59	0.43
Fluoranthene	M	2800	mg/kg	0.10		1.7	0.83	3.0	3.8	4.2	4.9	3.2	2.6	2.6
Pyrene	M	2800	mg/kg	0.10		1.3	0.74	2.2	3.0	3.1	3.7	2.4	1.9	2.2
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.90	0.78	1.3	1.6	2.0	2.3	1.3	1.0	1.3
Chrysene	M	2800	mg/kg	0.10		0.96	0.80	1.3	1.9	2.4	2.7	1.4	1.2	1.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.4	1.2	1.8	2.3	2.7	2.9	1.7	1.2	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.45	0.44	0.73	0.87	0.84	0.90	0.51	0.35	0.59
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.0	1.0	1.3	1.7	1.8	2.0	1.2	0.87	1.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.83	< 0.10	1.0	1.5	1.3	1.3	< 0.10	< 0.10	1.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.18	< 0.10	0.22	0.24	0.37	0.19	< 0.10	< 0.10	0.66
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.75	< 0.10	0.91	1.3	1.3	1.2	< 0.10	< 0.10	1.1
Total Of 16 PAH's	N	2800	mg/kg	2.0		14	6.4	19	24	28	30	17	16	19
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471
		Client Sample ID.:			3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	3.9	3.1	4.8	5.9	4.7	5.9	5.7	7.1	5.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.9	11.0	11.9	11.9	11.9	11.5	11.9	> 12.0	12.0
Cyanide (Total)	M	2300	mg/kg	0.50	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	1.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.73	1.1	< 0.50	< 0.50	0.70	0.54	< 0.50	< 0.50	0.54
Iron (Total)	N	2430	mg/kg	100	27000	27000	27000	27000	27000	28000	27000	27000	27000
Arsenic	M	2450	mg/kg	1.0	16	13	12	15	16	12	13	13	13
Cadmium	M	2450	mg/kg	0.10	0.52	0.43	0.83	0.82	0.52	0.52	0.69	0.48	0.47
Chromium	M	2450	mg/kg	1.0	320	290	310	300	270	210	270	250	280
Manganese	M	2450	mg/kg	5.0	22000	21000	22000	20000	17000	13000	18000	18000	22000
Copper	M	2450	mg/kg	0.50	35	30	30	31	27	21	26	26	31
Mercury	M	2450	mg/kg	0.10	0.74	0.70	1.0	1.2	0.59	0.48	0.49	0.53	0.83
Nickel	M	2450	mg/kg	0.50	45	36	31	35	38	27	36	36	37
Lead	M	2450	mg/kg	0.50	110	89	130	150	120	110	91	130	130
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.28	< 0.20	0.31	0.61	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	1200	1100	1000	1000	700	570	810	760	870
Zinc	M	2450	mg/kg	0.50	100	94	110	130	110	100	90	100	91
Organic Matter	M	2625	%	0.40	4.7	5.2	6.2	7.2	11	7.1	6.2	5.3	4.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	310	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471
					Client Sample ID.:	3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	440	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		0.67	1.1	0.68	0.70	0.84	1.4	0.71	0.78	0.50
Acenaphthylene	N	2800	mg/kg	0.10		0.20	0.14	< 0.10	0.14	0.23	0.32	0.18	0.38	0.15
Acenaphthene	M	2800	mg/kg	0.10		0.25	0.23	0.16	0.18	0.10	0.71	0.18	0.15	0.14
Fluorene	M	2800	mg/kg	0.10		0.17	0.15	0.14	< 0.10	0.20	0.50	0.14	0.32	0.23
Phenanthrene	M	2800	mg/kg	0.10		3.5	3.2	3.3	3.4	5.4	6.2	3.4	5.2	2.7
Anthracene	M	2800	mg/kg	0.10		0.60	0.58	0.38	0.38	1.1	1.2	0.48	0.67	0.86
Fluoranthene	M	2800	mg/kg	0.10		6.9	6.3	3.9	5.6	7.3	11	4.9	6.1	4.8
Pyrene	M	2800	mg/kg	0.10		4.6	4.4	2.6	4.1	4.4	8.6	3.3	3.8	3.8
Benzo[a]anthracene	M	2800	mg/kg	0.10		4.3	3.4	1.8	3.0	3.5	6.1	2.8	2.9	3.8
Chrysene	M	2800	mg/kg	0.10		4.2	3.7	2.4	3.5	3.6	5.9	3.1	3.1	4.0
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		5.5	5.1	3.1	4.9	4.0	9.6	4.1	4.1	4.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		2.1	1.7	0.97	1.9	1.4	3.5	1.4	1.3	2.7
Benzo[a]pyrene	M	2800	mg/kg	0.10		3.9	3.6	1.9	3.7	2.7	10	3.0	3.0	3.9
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		3.3	2.9	1.8	3.2	2.1	7.5	2.6	2.2	3.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.90	0.54	0.42	0.63	0.54	1.1	0.56	0.54	2.0
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.3	2.3	1.5	2.3	1.6	5.7	2.0	1.6	3.2
Total Of 16 PAH's	N	2800	mg/kg	2.0		43	39	25	38	39	79	33	36	41
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480
		Client Sample ID.:			3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.3	4.3	4.6	10	8.8	13	11	6.6	4.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	12.0	11.6	11.4	10.5	10.6	9.6	9.8	9.9	10.6
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	4.3	5.3	0.90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.58	0.67	0.78	1.0	1.0	3.3	3.0	1.4	0.86
Iron (Total)	N	2430	mg/kg	100	27000	27000	26000	29000	29000	29000	26000	32000	30000
Arsenic	M	2450	mg/kg	1.0	14	15	17	14	12	8.5	11	17	17
Cadmium	M	2450	mg/kg	0.10	0.63	0.47	0.77	0.59	0.55	0.86	0.56	0.45	0.43
Chromium	M	2450	mg/kg	1.0	290	280	240	150	180	46	77	67	110
Manganese	M	2450	mg/kg	5.0	22000	18000	18000	7500	8100	2200	3200	5100	6900
Copper	M	2450	mg/kg	0.50	34	25	23	22	23	20	29	23	26
Mercury	M	2450	mg/kg	0.10	0.83	0.69	0.85	0.58	0.56	0.39	0.52	0.25	0.25
Nickel	M	2450	mg/kg	0.50	37	35	33	26	24	18	20	33	34
Lead	M	2450	mg/kg	0.50	170	110	120	140	140	130	150	310	250
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	0.36	0.43	0.95	0.95	0.67	0.25
Vanadium	U	2450	mg/kg	5.0	990	1000	1100	230	220	76	130	240	300
Zinc	M	2450	mg/kg	0.50	120	110	120	160	220	100	140	120	97
Organic Matter	M	2625	%	0.40	8.3	9.8	7.6	13	24	48	72	55	72
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	8.3	4.8	11	8.2	7.9	8.3	11	7.3
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	8.2	8.6	11	25	11	8.4	8.1	9.1
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.4	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	120	29	< 1.0	< 1.0	< 1.0	8.1
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	17	13	140	62	26	17	19	24
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	2.1	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	5.6	< 1.0	< 1.0	2.5	< 1.0	7.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	4.6	1.7	7.2	< 1.0	2.2	< 1.0	< 1.0	16
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	4.2	< 1.0	12	28	< 1.0	7.1	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	5.8	6.2	8.8	40	16	1.4	3.0	1.2

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480
					Client Sample ID.:	3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	9.6	1.0	15	210	< 1.0	< 1.0	3.6	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	71	4.6	530	500	1.1	23	< 1.0	1.6
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	96	14	580	780	22	36	7.6	26
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	110	27	720	840	48	53	27	50
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		0.68	0.89	1.3	1.0	< 0.10	2.1	< 0.10	1.7	2.0
Acenaphthylene	N	2800	mg/kg	0.10		0.20	0.24	0.57	0.17	< 0.10	0.19	< 0.10	< 0.10	0.14
Acenaphthene	M	2800	mg/kg	0.10		0.15	0.13	0.20	< 0.10	< 0.10	0.20	< 0.10	0.17	0.38
Fluorene	M	2800	mg/kg	0.10		0.17	0.29	0.51	0.33	< 0.10	0.48	< 0.10	0.22	0.43
Phenanthrene	M	2800	mg/kg	0.10		4.3	2.6	1.9	2.1	1.9	2.9	4.0	2.3	3.0
Anthracene	M	2800	mg/kg	0.10		0.54	0.79	1.8	0.84	0.72	0.76	1.4	0.52	0.75
Fluoranthene	M	2800	mg/kg	0.10		7.3	4.7	11	3.2	1.8	3.0	3.4	2.0	2.9
Pyrene	M	2800	mg/kg	0.10		5.1	3.7	7.0	2.8	1.9	2.4	3.4	1.6	2.5
Benzo[a]anthracene	M	2800	mg/kg	0.10		3.2	3.0	5.2	2.6	1.3	1.6	2.0	0.87	1.3
Chrysene	M	2800	mg/kg	0.10		3.7	3.1	5.3	2.6	1.2	1.8	2.2	1.1	1.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		4.7	3.8	6.1	2.7	1.3	1.8	2.0	1.1	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		1.8	2.3	2.3	2.0	0.61	0.80	0.89	0.37	0.57
Benzo[a]pyrene	M	2800	mg/kg	0.10		3.5	3.2	4.2	2.5	0.92	1.3	1.7	0.77	1.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		2.9	2.9	3.5	2.4	< 0.10	1.1	< 0.10	0.53	0.76
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.61	1.5	0.84	1.6	< 0.10	0.55	< 0.10	0.19	0.24
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.5	2.6	2.8	2.1	< 0.10	0.99	< 0.10	0.60	1.0
Total Of 16 PAH's	N	2800	mg/kg	2.0		41	36	55	29	12	22	21	14	20
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367481	1367482
		Client Sample ID.:			3CP72	3CP73
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.20	0.20
		Bottom Depth (m):			0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	4.0	5.0
Soil Colour	N	2040		N/A	Black	Black
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	9.9	10.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.1	1.2
Iron (Total)	N	2430	mg/kg	100	32000	31000
Arsenic	M	2450	mg/kg	1.0	16	13
Cadmium	M	2450	mg/kg	0.10	0.17	0.25
Chromium	M	2450	mg/kg	1.0	45	51
Manganese	M	2450	mg/kg	5.0	4400	4700
Copper	M	2450	mg/kg	0.50	27	29
Mercury	M	2450	mg/kg	0.10	0.13	0.17
Nickel	M	2450	mg/kg	0.50	38	28
Lead	M	2450	mg/kg	0.50	360	360
Selenium	M	2450	mg/kg	0.20	0.67	0.59
Vanadium	U	2450	mg/kg	5.0	200	200
Zinc	M	2450	mg/kg	0.50	61	70
Organic Matter	M	2625	%	0.40	91	60
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	7.4	6.5
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	8.0	9.8
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	15	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	300	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	330	16
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	7.2
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	3.9	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	1.5	3.4

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-04545	22-04545
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1367481	1367482
			Client Sample ID.:		3CP72	3CP73
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.20	0.20
			Bottom Depth (m):		0.20	0.20
			Date Sampled:		04-Feb-2022	04-Feb-2022
			Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	21	7.4
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	110	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140	18
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	460	34
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	2.7	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.15	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.39	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.36	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	3.5	0.44
Anthracene	M	2800	mg/kg	0.10	0.76	0.12
Fluoranthene	M	2800	mg/kg	0.10	3.0	0.95
Pyrene	M	2800	mg/kg	0.10	2.6	0.81
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.4	0.74
Chrysene	M	2800	mg/kg	0.10	1.7	0.77
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6	1.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.51	0.48
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.3	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.77	0.74
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.27	0.26
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.93	0.67
Total Of 16 PAH's	N	2800	mg/kg	2.0	22	8.4
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-05118-1
Initial Date of Issue:	17-Feb-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	7
Turnaround (Wkdays):	3
Date Approved:	17-Feb-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	11-Feb-2022
Date Instructed:	11-Feb-2022
Results Due:	15-Feb-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1370291	1370292	1370293	1370294	1370295	1370296	1370297
		Client Sample ID.:			3CP1-47	3CP1-48	3CP1-49	3CP1-50	3CP1-51	3CP1-52	3CP1-53
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type	U	2192		N/A	-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	8.7	8.0	6.6	9.9	8.8	6.7	7.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Grey	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	9.3	11.0	11.5	12.0	> 12.0	> 12.0	> 12.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	12	10	5.3	2.6	2.0	1.5	1.3
Iron (Total)	N	2430	mg/kg	100	200000	120000	140000	150000	140000	140000	130000
Arsenic	M	2450	mg/kg	1.0	14	15	17	22	20	20	22
Cadmium	M	2450	mg/kg	0.10	0.85	0.83	0.83	0.53	0.43	0.25	0.46
Chromium	M	2450	mg/kg	1.0	70	280	390	480	420	550	550
Manganese	M	2450	mg/kg	5.0	4900	23000	24000	36000	32000	38000	43000
Copper	M	2450	mg/kg	0.50	23	25	25	52	31	25	29
Mercury	M	2450	mg/kg	0.10	0.37	0.27	0.34	0.73	0.66	0.48	0.54
Nickel	M	2450	mg/kg	0.50	32	39	37	46	41	40	41
Lead	M	2450	mg/kg	0.50	88	63	69	61	53	26	37
Selenium	M	2450	mg/kg	0.20	0.27	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	91	1400	1600	1600	1600	2200	2300
Zinc	M	2450	mg/kg	0.50	240	130	140	120	110	69	78
Organic Matter	M	2625	%	0.40	12	3.3	2.6	6.7	3.6	2.6	2.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	190	160	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	190	160	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	290	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1370291	1370292	1370293	1370294	1370295	1370296	1370297
					Client Sample ID.:	3CP1-47	3CP1-48	3CP1-49	3CP1-50	3CP1-51	3CP1-52	3CP1-53
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Date Sampled:	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	290	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	480	160	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		22	18	11	9.7	6.9	5.3	6.6
Acenaphthylene	N	2800	mg/kg	0.10		2.0	0.30	0.32	0.25	0.25	0.10	0.19
Acenaphthene	M	2800	mg/kg	0.10		1.4	1.8	0.80	1.2	0.90	0.45	0.58
Fluorene	M	2800	mg/kg	0.10		2.1	0.50	0.52	0.31	0.26	< 0.10	0.14
Phenanthrene	M	2800	mg/kg	0.10		14	4.7	5.5	4.7	3.9	1.5	2.9
Anthracene	M	2800	mg/kg	0.10		3.7	1.1	1.0	0.58	0.54	0.21	0.35
Fluoranthene	M	2800	mg/kg	0.10		19	8.5	6.1	6.4	6.1	2.2	4.9
Pyrene	M	2800	mg/kg	0.10		13	7.2	4.1	5.1	4.7	1.5	3.6
Benzo[a]anthracene	M	2800	mg/kg	0.10		6.8	4.6	2.9	3.3	3.5	0.99	3.0
Chrysene	M	2800	mg/kg	0.10		7.3	5.1	3.3	4.0	4.0	1.3	3.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		8.9	7.5	4.1	5.2	5.4	1.5	4.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		2.9	2.7	1.5	1.9	2.0	0.48	1.6
Benzo[a]pyrene	M	2800	mg/kg	0.10		7.0	6.3	3.1	4.5	4.6	1.0	3.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		5.5	5.1	2.8	3.4	3.7	1.1	2.5
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.97	0.88	0.57	0.70	0.70	0.20	0.59
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		4.8	4.8	2.6	3.5	3.5	0.93	2.6
Total Of 16 PAH's	N	2800	mg/kg	2.0		120	79	50	55	51	19	41
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-10648-1
Initial Date of Issue:	25-Mar-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	11
Turnaround (Wkdays):	5
Date Approved:	25-Mar-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	22-Mar-2022
Date Instructed:	22-Mar-2022
Results Due:	28-Mar-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1395704	1395705	1395706	1395707	1395708	1395709	1395710	1395711	1395712
		Client Sample ID.:			AG33-1	AG34-1	AG35-1	R-CSP-7	R-CSP-8	R-4hNB-1	Avenue Road - 8	Avenue Road - 9	Avenue Road - 10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	13	12	8.6	12	11	13	13	11	6.6
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.2	8.2	8.6	8.8	9.4	9.2	9.5	9.6	9.2
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	2.1	1.3	1.5	2.0	1.5	0.70
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	15	39	26	2.6	8.6	0.86	1.5	3.7	5.1
Iron (Total)	N	2430	mg/kg	100	21000	8000	16000	24000	23000	19000	24000	21000	27000
Arsenic	M	2450	mg/kg	1.0	10	5.4	9.0	13	12	15	15	13	13
Cadmium	M	2450	mg/kg	0.10	0.31	< 0.10	0.18	0.78	0.44	0.30	0.86	0.44	0.33
Chromium	M	2450	mg/kg	1.0	92	16	27	120	40	57	77	40	44
Manganese	M	2450	mg/kg	5.0	5300	550	1200	6500	2100	4100	4500	2500	3700
Copper	M	2450	mg/kg	0.50	16	35	30	25	28	14	31	22	25
Mercury	M	2450	mg/kg	0.10	0.14	< 0.10	< 0.10	0.73	0.29	0.13	0.37	0.51	0.29
Nickel	M	2450	mg/kg	0.50	31	17	29	24	26	19	30	21	34
Lead	M	2450	mg/kg	0.50	33	36	32	120	200	29	110	88	75
Selenium	M	2450	mg/kg	0.20	0.29	0.49	0.67	0.49	0.67	0.71	0.41	0.30	< 0.20
Vanadium	U	2450	mg/kg	5.0	93	21	48	150	57	100	89	60	47
Zinc	M	2450	mg/kg	0.50	110	37	52	360	170	93	330	200	120
Organic Matter	M	2625	%	0.40	6.6	29	17	9.8	36	6.0	7.1	12	11
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	9.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	220	67	< 1.0	< 1.0	58	77
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	230	67	< 5.0	< 5.0	58	77
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1395704	1395705	1395706	1395707	1395708	1395709	1395710	1395711	1395712
		Client Sample ID.:			AG33-1	AG34-1	AG35-1	R-CSP-7	R-CSP-8	R-4hNB-1	Avenue Road - 8	Avenue Road - 9	Avenue Road - 10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	15	4.8	< 1.0	< 1.0	9.5	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	140	88	< 1.0	< 1.0	100	38
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	150	93	< 5.0	< 5.0	110	38
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	380	160	< 10	< 10	170	120
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.6	1.9	< 0.10	1.7	1.4	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.69	0.25	< 0.10	0.82	0.50	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.21	0.15	< 0.10	0.33	0.23	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.77	0.39	< 0.10	0.76	0.52	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.97	< 0.10	1.3	6.2	2.4	0.27	5.5	5.1	0.66
Anthracene	M	2800	mg/kg	0.10	0.46	< 0.10	0.28	1.9	0.51	< 0.10	1.2	1.3	0.15
Fluoranthene	M	2800	mg/kg	0.10	2.7	0.83	1.8	10	2.5	0.52	10	8.5	0.85
Pyrene	M	2800	mg/kg	0.10	1.8	0.70	1.2	7.5	1.8	0.49	7.5	6.3	0.73
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.8	0.35	1.1	4.4	1.1	0.33	4.8	4.4	0.54
Chrysene	M	2800	mg/kg	0.10	1.7	0.36	0.89	4.6	1.4	0.35	4.8	4.5	0.47
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.2	0.64	1.1	6.0	1.7	0.32	7.0	7.2	0.94
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.71	0.28	0.43	2.2	0.46	0.13	2.4	2.2	0.28
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.5	0.45	0.88	4.2	1.1	0.41	4.8	5.2	0.62
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.0	0.36	0.60	3.2	0.72	0.40	4.0	4.5	0.60
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.21	0.11	0.18	0.66	0.21	< 0.10	0.76	0.78	0.11
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.93	0.32	0.52	3.4	0.87	0.32	3.6	4.7	0.56
Total Of 16 PAH's	N	2800	mg/kg	2.0	16	4.4	10	58	18	3.5	60	57	6.5
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-10648	22-10648
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1395713	1395714
		Client Sample ID.:			Avenue Road - 11	Avenue Road - 12
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.2	0.2
		Bottom Depth (m):			0.2	0.2
		Date Sampled:			18-Mar-2022	18-Mar-2022
		Asbestos Lab:			NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected	
Moisture	N	2030	%	0.020	7.5	12
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	9.3	9.9
Cyanide (Total)	M	2300	mg/kg	0.50	2.1	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	16	1.9
Iron (Total)	N	2430	mg/kg	100	23000	22000
Arsenic	M	2450	mg/kg	1.0	12	6.9
Cadmium	M	2450	mg/kg	0.10	0.26	0.61
Chromium	M	2450	mg/kg	1.0	31	110
Manganese	M	2450	mg/kg	5.0	2000	5200
Copper	M	2450	mg/kg	0.50	21	15
Mercury	M	2450	mg/kg	0.10	0.19	0.16
Nickel	M	2450	mg/kg	0.50	22	16
Lead	M	2450	mg/kg	0.50	53	83
Selenium	M	2450	mg/kg	0.20	0.40	0.37
Vanadium	U	2450	mg/kg	5.0	48	140
Zinc	M	2450	mg/kg	0.50	120	350
Organic Matter	M	2625	%	0.40	9.7	21
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	7.3
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	26
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	220
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	250
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-10648	22-10648
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1395713	1395714
			Client Sample ID.:		Avenue Road - 11	Avenue Road - 12
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		18-Mar-2022	18-Mar-2022
			Asbestos Lab:		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	28
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	240
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	280
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	520
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.91	21
Anthracene	M	2800	mg/kg	0.10	0.23	6.2
Fluoranthene	M	2800	mg/kg	0.10	1.6	28
Pyrene	M	2800	mg/kg	0.10	1.3	20
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.79	12
Chrysene	M	2800	mg/kg	0.10	0.76	13
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.3	16
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.39	5.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.98	11
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.77	9.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	1.7
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.68	7.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	9.8	150
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-14707-1		
Initial Date of Issue:	25-Apr-2022		
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	21-Apr-2022
Order No.:	PO115623	**Date Instructed:**	21-Apr-2022
No. of Samples:	12		
Turnaround (Wkdays):	3	**Results Due:**	25-Apr-2022
Date Approved:	25-Apr-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1414486	1414487	1414488	1414489	1414490	1414491	1414492	1414493	1414494
		Client Sample ID.:			5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP2-1	5e1-SP2-2	5e1-SP2-3	4H-SV12	4H-SV13	4H-SV14
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	41	39	35	27	27	39	37	57	37
Soil Colour	N	2040		N/A	Brown	Black	Black	Brown	Brown	Grey	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.7	11.1	11.0	10.4	9.9	10.7	9.4	10.6	10.1
Cyanide (Total)	M	2300	mg/kg	0.50	4.3	< 0.50	< 0.50	< 0.50	5.9	< 0.50	8.5	0.50	0.60
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	3.9	11	7.3	10	0.93	3.9	2.6	6.5
Iron (Total)	N	2430	mg/kg	100	24000	40000	39000	30000	31000	35000	30000	30000	30000
Arsenic	M	2450	mg/kg	1.0	7.4	12	8.8	6.0	6.4	9.0	11	13	6.2
Cadmium	M	2450	mg/kg	0.10	0.44	0.56	0.16	0.24	0.35	0.39	0.36	0.36	0.36
Chromium	M	2450	mg/kg	1.0	74	58	50	35	28	210	41	49	39
Manganese	M	2450	mg/kg	5.0	4500	3600	2800	2400	1500	16000	3100	3500	2500
Copper	M	2450	mg/kg	0.50	11	13	12	11	12	26	20	16	12
Mercury	M	2450	mg/kg	0.10	< 0.10	0.26	0.10	< 0.10	0.29	0.36	0.44	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	15	19	17	17	13	31	24	21	13
Lead	M	2450	mg/kg	0.50	25	34	26	29	46	58	52	46	42
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.23	0.29	0.27	0.22	0.60	0.25	0.43
Vanadium	U	2450	mg/kg	5.0	70	130	72	75	57	810	73	70	83
Zinc	M	2450	mg/kg	0.50	70	83	58	88	120	100	110	110	120
Organic Matter	M	2625	%	0.40	10	14	17	7.9	21	3.8	11	10	5.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	830	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	2500	< 1.0	< 1.0	210	210	< 1.0	280	1100	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	3700	< 5.0	< 5.0	210	210	< 5.0	280	1100	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	36	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	43	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	37	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707
Quotation No.: Q21-24056					Chemtest Sample ID.:	1414486	1414487	1414488	1414489	1414490	1414491	1414492	1414493	1414494
					Client Sample ID.:	5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP2-1	5e1-SP2-2	5e1-SP2-3	4H-SV12	4H-SV13	4H-SV14
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
					Bottom Depth (m):	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
					Date Sampled:	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		820	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	540	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		840	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	120	540	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		4500	< 10	< 10	210	210	< 10	390	1700	< 10
Benzene	M	2760	µg/kg	1.0		21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120	37	< 1.0
Toluene	M	2760	µg/kg	1.0		9.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	97	24	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		6.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.6	2.6	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	46	13	< 1.0
o-Xylene	M	2760	µg/kg	1.0		9.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	3.4	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		7.5	1.3	3.0	< 0.10	2.4	0.59	34	2.1	1.3
Acenaphthylene	N	2800	mg/kg	0.10		0.47	0.12	0.32	< 0.10	0.26	0.16	0.41	0.19	0.42
Acenaphthene	M	2800	mg/kg	0.10		0.30	0.14	0.36	< 0.10	0.15	< 0.10	0.99	0.12	0.19
Fluorene	M	2800	mg/kg	0.10		0.52	0.25	0.49	< 0.10	0.39	0.17	0.93	0.27	0.41
Phenanthrene	M	2800	mg/kg	0.10		2.8	1.5	3.4	0.83	2.8	1.4	1.9	1.8	3.8
Anthracene	M	2800	mg/kg	0.10		0.86	0.35	0.68	0.24	0.56	0.30	0.59	0.45	1.2
Fluoranthene	M	2800	mg/kg	0.10		4.6	1.8	4.5	1.2	2.8	2.1	2.6	2.4	6.1
Pyrene	M	2800	mg/kg	0.10		3.6	1.3	3.4	0.98	2.3	1.4	2.1	1.6	4.5
Benzo[a]anthracene	M	2800	mg/kg	0.10		2.3	0.89	2.2	0.72	1.2	0.99	1.2	0.94	3.0
Chrysene	M	2800	mg/kg	0.10		2.3	0.76	1.8	0.68	1.1	1.2	1.3	0.78	3.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		3.0	1.3	3.1	0.62	1.9	1.0	1.9	1.5	4.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.96	0.34	1.0	0.25	0.24	0.33	0.58	0.49	1.5
Benzo[a]pyrene	M	2800	mg/kg	0.10		2.5	1.1	2.6	0.73	1.3	0.87	1.4	1.0	3.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		1.9	0.65	1.7	0.61	0.94	0.74	0.93	0.74	2.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.44	0.12	0.51	0.14	0.15	0.26	0.27	0.19	0.48
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		1.6	0.68	1.6	0.57	0.96	0.68	1.1	0.74	2.4
Total Of 16 PAH's	N	2800	mg/kg	2.0		36	13	31	7.6	20	12	52	15	39
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14707	22-14707	22-14707
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1414495	1414496	1414497
		Client Sample ID.:			4H-SV15	4H-SV16	4H-SV17
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2
		Bottom Depth (m):			0.2	0.2	0.2
		Date Sampled:			19-Apr-2022	19-Apr-2022	19-Apr-2022
		Asbestos Lab:				NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected	
Moisture	N	2030	%	0.020	44	37	46
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.8	10.1	9.9
Cyanide (Total)	M	2300	mg/kg	0.50	3.9	< 0.50	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	3.3	0.72	6.0
Iron (Total)	N	2430	mg/kg	100	32000	34000	31000
Arsenic	M	2450	mg/kg	1.0	9.0	7.8	38
Cadmium	M	2450	mg/kg	0.10	0.44	0.54	0.44
Chromium	M	2450	mg/kg	1.0	45	60	52
Manganese	M	2450	mg/kg	5.0	3100	3200	3600
Copper	M	2450	mg/kg	0.50	14	16	15
Mercury	M	2450	mg/kg	0.10	0.12	0.20	< 0.10
Nickel	M	2450	mg/kg	0.50	18	16	15
Lead	M	2450	mg/kg	0.50	50	67	52
Selenium	M	2450	mg/kg	0.20	0.32	0.38	0.44
Vanadium	U	2450	mg/kg	5.0	59	90	100
Zinc	M	2450	mg/kg	0.50	120	170	140
Organic Matter	M	2625	%	0.40	7.8	4.7	4.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	12	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	12	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14707	22-14707	22-14707
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1414495	1414496	1414497
			Client Sample ID.:		4H-SV15	4H-SV16	4H-SV17
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2
			Bottom Depth (m):		0.2	0.2	0.2
			Date Sampled:		19-Apr-2022	19-Apr-2022	19-Apr-2022
			Asbestos Lab:			NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	67	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	67	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	79	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	26	9.4
Toluene	M	2760	µg/kg	1.0	< 1.0	11	4.8
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	6.1	3.4	1.3
Acenaphthylene	N	2800	mg/kg	0.10	0.32	0.56	0.36
Acenaphthene	M	2800	mg/kg	0.10	0.25	0.21	0.17
Fluorene	M	2800	mg/kg	0.10	0.35	0.42	0.77
Phenanthrene	M	2800	mg/kg	0.10	2.3	2.7	4.2
Anthracene	M	2800	mg/kg	0.10	0.65	0.94	0.87
Fluoranthene	M	2800	mg/kg	0.10	3.8	4.6	4.9
Pyrene	M	2800	mg/kg	0.10	2.9	3.6	3.5
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.8	2.3	2.3
Chrysene	M	2800	mg/kg	0.10	1.8	2.0	2.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.5	3.3	3.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.83	1.2	0.98
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.8	2.4	2.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.2	1.8	1.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.26	0.37	0.37
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.3	1.8	1.4
Total Of 16 PAH's	N	2800	mg/kg	2.0	28	32	30
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-14900-1
Initial Date of Issue:	26-Apr-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	21
Turnaround (Wkdays):	3
Date Approved:	26-Apr-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	22-Apr-2022
Date Instructed:	22-Apr-2022
Results Due:	26-Apr-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348	1415349
Order No.: PO115623		Client Sample Ref.:			AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2	AQ27-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5	0.4
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-			-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	5.6	13	9.0	16	3.9	12	8.4	15	10
Soil Colour	N	2040		N/A	Brown	Brown	Black	Black	Brown	Black	Brown	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.4	10.5	11.0	10.3	10.4	9.9	11.4	10.9	11.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	3.0	< 0.50	0.60	< 0.50	1.2	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.6	0.93	0.72	1.2	4.9	4.3	1.3	2.1	8.6
Iron (Total)	N	2430	mg/kg	100	34000	35000	32000	41000	26000	37000	28000	25000	12000
Arsenic	M	2455	mg/kg	1.0	5.7	4.2	4.3	11	5.8	8.3	4.6	4.9	4.6
Cadmium	M	2455	mg/kg	0.10	0.70	0.20	0.20	0.25	0.22	0.46	0.24	0.17	< 0.10
Chromium	M	2455	mg/kg	1.0	78	52	240	43	43	21	190	25	12
Manganese	M	2455	mg/kg	5.0	6500	5500	12000	3300	4400	2900	11000	2000	2400
Copper	M	2455	mg/kg	0.50	29	55	20	19	9.0	15	21	14	13
Mercury	M	2455	mg/kg	0.10	0.22	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	24	41	16	16	9.4	10	13	9.4	4.3
Lead	M	2455	mg/kg	0.50	37	26	19	71	21	63	22	40	14
Selenium	M	2455	mg/kg	0.20	2.7	2.6	1.8	0.94	2.3	1.5	2.5	1.9	3.4
Vanadium	U	2455	mg/kg	5.0	160	140	450	82	110	46	320	50	24
Zinc	M	2455	mg/kg	0.50	110	48	61	170	73	140	52	50	12
Organic Matter	M	2625	%	0.40	1.9	1.7	6.4	100	14	28	8.5	66	6.0
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0	17
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	17
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	120	540	< 1.0	46
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	12	< 5.0	< 5.0	< 5.0	150	540	< 5.0	79
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348	1415349
Order No.: PO115623			Client Sample Ref.:		AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2	AQ27-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5	0.4
			Date Sampled:		20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
			Asbestos Lab:		NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	350	< 1.0	170	< 1.0	210	160	< 1.0	29
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.7
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	350	< 5.0	170	< 5.0	210	160	< 5.0	35
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	360	< 10	170	< 10	360	690	< 10	110
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	1.8	2.5	3.7	3.4
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	2.0	1.6	2.8	2.3
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	2.1	< 0.10	1.5	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.44	< 0.10	0.20	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.78	< 0.10	0.25	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.24	0.12	0.47	4.5	0.90	1.0	1.1	1.3	0.23
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.0	0.18	0.18	0.20	0.25	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.50	0.25	1.3	5.4	0.99	0.88	2.5	0.85	0.20
Pyrene	M	2800	mg/kg	0.10	0.60	0.22	1.4	4.0	0.80	0.78	2.4	0.79	0.21
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.33	0.14	0.64	4.3	0.42	0.37	1.9	0.50	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.38	0.14	0.88	3.8	0.40	0.41	2.4	0.49	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.68	0.29	1.4	7.3	0.83	0.60	3.9	0.74	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.18	0.12	0.51	2.4	0.22	0.20	1.4	0.15	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.57	0.26	0.89	5.6	0.66	0.38	2.8	0.50	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.41	< 0.10	0.76	3.4	0.57	0.30	2.0	0.27	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.14	1.2	0.14	0.11	0.38	0.11	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.40	< 0.10	0.73	3.2	0.63	0.41	1.9	0.34	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.3	< 2.0	9.1	50	6.7	7.7	23	6.3	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415350	1415351	1415352	1415353	1415354	1415355	1415356	1415357	1415358
Order No.: PO115623		Client Sample Ref.:			AP27-1	AR26-1	AR25-1	AR26-2	AR24-1	AR24-2	AQ22-1	AQ22-2	AP22-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.4	0.5	0.4	1.5	0.3	1.6	0.3	1.7	0.5
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	6.1	6.9	4.8	12	4.1	12	6.4	13	10
Soil Colour	N	2040		N/A	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Loam	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.8	11.6	11.2	10.9	> 12.0	10.2	10.7	10.9	10.4
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	0.90	< 0.50	0.60	< 0.50	0.60	< 0.50	1.8	1.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	2.2	5.8	1.7	1.1	38	6.9	6.2	10
Iron (Total)	N	2430	mg/kg	100	11000	34000	38000	13000	35000	13000	16000	13000	15000
Arsenic	M	2455	mg/kg	1.0	3.6	3.3	7.9	4.0	4.6	3.5	4.7	3.7	5.4
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.11	< 0.10	< 0.10	0.37	< 0.10	0.22	0.10	0.41
Chromium	M	2455	mg/kg	1.0	48	140	27	59	380	9.7	12	74	16
Manganese	M	2455	mg/kg	5.0	3500	9200	2000	4800	23000	640	1600	2800	1300
Copper	M	2455	mg/kg	0.50	45	13	13	7.7	44	14	11	7.4	15
Mercury	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	5.5	11	21	5.3	14	7.1	5.6	9.2	15
Lead	M	2455	mg/kg	0.50	18	16	32	12	42	16	18	12	54
Selenium	M	2455	mg/kg	0.20	4.2	< 0.20	< 0.20	6.8	12	0.48	1.2	3.7	2.5
Vanadium	U	2455	mg/kg	5.0	85	520	140	88	370	16	26	120	35
Zinc	M	2455	mg/kg	0.50	29	39	66	22	110	49	51	25	49
Organic Matter	M	2625	%	0.40	13	2.1	0.81	7.6	6.2	62	8.1	2.9	6.6
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	8.0	< 1.0	16	19	13	14	48	7.8	14
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	56	< 1.0	23	38	22	20	110	21	20
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	50	< 1.0	54	35	24	26	100	22	37
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	52	70	350	140	100	70	330	39	69
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	170	70	440	230	160	130	590	90	140
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	2.6	9.6	3.6	4.1	5.5	< 1.0	2.6
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	4.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1415350	1415351	1415352	1415353	1415354	1415355	1415356	1415357	1415358
Order No.: PO115623			Client Sample Ref.:		AP27-1	AR26-1	AR25-1	AR26-2	AR24-1	AR24-2	AQ22-1	AQ22-2	AP22-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.4	0.5	0.4	1.5	0.3	1.6	0.3	1.7	0.5
			Date Sampled:		20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
			Asbestos Lab:		NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	32	40	52	58	37	36	170	35	31
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	6.4	< 1.0	5.9	7.2	< 1.0	5.0	17	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	38	40	61	80	40	45	190	35	34
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	200	110	510	310	200	170	780	120	170
Benzene	M	2760	µg/kg	1.0	7.6	< 1.0	< 1.0	8.9	< 1.0	63	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	2.9	< 1.0	< 1.0	2.3	< 1.0	17	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.73	< 0.10	2.1	< 0.10	< 0.10	0.54	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.14	< 0.10	0.11	< 0.10	< 0.10	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.27	< 0.10	0.23	< 0.10	< 0.10	0.43	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.16	< 0.10	0.30	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.44	2.2	0.35	1.6	0.70	1.8	0.91	0.33	0.50
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.40	< 0.10	0.35	< 0.10	0.10	0.16	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.29	4.2	0.55	1.4	1.3	0.21	0.63	0.15	0.41
Pyrene	M	2800	mg/kg	0.10	0.20	3.5	0.40	1.0	1.2	0.26	0.51	0.13	0.30
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.11	2.4	0.13	0.64	0.64	< 0.10	0.16	< 0.10	0.21
Chrysene	M	2800	mg/kg	0.10	0.17	2.9	0.17	0.70	0.71	0.57	0.27	< 0.10	0.22
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	4.2	< 0.10	0.57	1.3	< 0.10	0.36	< 0.10	0.23
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10	0.15	1.2	< 0.10	0.14	< 0.10	0.11
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	3.4	< 0.10	0.47	0.91	< 0.10	0.22	< 0.10	0.16
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	2.4	< 0.10	0.28	0.71	< 0.10	0.17	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.46	< 0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	2.2	< 0.10	0.38	0.79	< 0.10	0.19	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	31	< 2.0	10	9.5	2.9	5.1	< 2.0	2.1
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.32	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.18	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.57	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415359	1415360	1415361
Order No.: PO115623		Client Sample Ref.:			AP22-2	AR22-1	AR22-2
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			1.5	0.9	1.8
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A	-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	14	7.2	5.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Loam	Loam	Gravel
pH	M	2010		4.0	10.4	9.8	10.8
Cyanide (Total)	M	2300	mg/kg	0.50	1.3	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.3	6.9	3.7
Iron (Total)	N	2430	mg/kg	100	14000	19000	12000
Arsenic	M	2455	mg/kg	1.0	4.8	6.1	1.8
Cadmium	M	2455	mg/kg	0.10	0.73	0.62	0.12
Chromium	M	2455	mg/kg	1.0	20	50	45
Manganese	M	2455	mg/kg	5.0	2100	8900	3000
Copper	M	2455	mg/kg	0.50	15	12	4.9
Mercury	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	14	12	5.8
Lead	M	2455	mg/kg	0.50	110	38	7.1
Selenium	M	2455	mg/kg	0.20	4.6	1.7	0.32
Vanadium	U	2455	mg/kg	5.0	43	75	130
Zinc	M	2455	mg/kg	0.50	60	130	24
Organic Matter	M	2625	%	0.40	2.4	2.8	1.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	20	12	12
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	19	34	21
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	25	31	21
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	53	99	72
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	120	180	130
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	4.0	7.5
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	45

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415359	1415360	1415361
Order No.: PO115623		Client Sample Ref.:			AP22-2	AR22-1	AR22-2
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			1.5	0.9	1.8
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	30	33	250
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	4.9	6.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	35	43	310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	150	220	430
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.72	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.14	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.73	0.23	0.23
Pyrene	M	2800	mg/kg	0.10	0.61	0.22	0.24
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.42	< 0.10	0.14
Chrysene	M	2800	mg/kg	0.10	0.34	< 0.10	0.16
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.51	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.17	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.37	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-15876-1
Initial Date of Issue:	05-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	5
Turnaround (Wkdays):	5
Date Approved:	05-May-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	29-Apr-2022
Date Instructed:	29-Apr-2022
Results Due:	06-May-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-15876	22-15876	22-15876	22-15876	22-15876
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1419723	1419724	1419725	1419726	1419727
		Client Sample ID.:			5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP2-4
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	7.3	3.7	3.6	8.4	1.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	9.2	10.2	9.6	9.0
Cyanide (Total)	M	2300	mg/kg	0.50	1.5	< 0.50	< 0.50	1.2	3.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	20	4.0	0.86	11	20
Iron (Total)	N	2430	mg/kg	100	44000	51000	50000	30000	39000
Arsenic	M	2455	mg/kg	0.5	26	37	35	12	16
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.75	< 0.10	< 0.10	0.66
Chromium	M	2455	mg/kg	0.5	57	66	46	23	66
Manganese	M	2455	mg/kg	1.0	1400	10000	5500	900	4500
Copper	M	2455	mg/kg	0.50	26	98	35	27	25
Mercury	M	2455	mg/kg	0.05	0.15	1.3	0.12	0.06	0.14
Nickel	M	2455	mg/kg	0.50	28	32	28	24	31
Lead	M	2455	mg/kg	0.50	33	210	72	30	110
Selenium	M	2455	mg/kg	0.25	1.5	1.4	0.89	1.7	1.6
Vanadium	U	2455	mg/kg	0.5	100	150	140	46	170
Zinc	M	2455	mg/kg	0.50	100	440	120	64	350
Organic Matter	M	2625	%	0.40	5.5	3.3	0.98	12	13
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	40	< 1.0	< 1.0	< 1.0	240
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	40	< 5.0	< 5.0	< 5.0	240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	20	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	120	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-15876	22-15876	22-15876	22-15876	22-15876
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1419723	1419724	1419725	1419726	1419727
			Client Sample ID.:		5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP2-4
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20
			Date Sampled:		28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
			Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	190	< 1.0	< 1.0	< 1.0	190
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	330	< 5.0	< 5.0	< 5.0	190
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	370	< 10	< 10	< 10	440
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.2	< 0.10	0.31	1.3	1.1
Acenaphthylene	N	2800	mg/kg	0.10	0.17	< 0.10	0.22	0.29	0.12
Acenaphthene	M	2800	mg/kg	0.10	2.7	< 0.10	0.16	0.17	0.18
Fluorene	M	2800	mg/kg	0.10	4.3	< 0.10	0.15	0.44	0.14
Phenanthrene	M	2800	mg/kg	0.10	57	0.55	0.60	2.4	0.94
Anthracene	M	2800	mg/kg	0.10	11	< 0.10	0.17	0.56	0.14
Fluoranthene	M	2800	mg/kg	0.10	40	0.39	0.50	2.4	0.99
Pyrene	M	2800	mg/kg	0.10	29	0.45	0.54	1.7	0.73
Benzo[a]anthracene	M	2800	mg/kg	0.10	11	< 0.10	0.20	0.85	0.62
Chrysene	M	2800	mg/kg	0.10	11	< 0.10	0.18	0.80	0.60
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	9.4	< 0.10	0.22	0.93	0.89
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	3.5	< 0.10	0.14	0.39	0.32
Benzo[a]pyrene	M	2800	mg/kg	0.10	6.8	< 0.10	0.20	0.71	0.68
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	3.6	< 0.10	0.20	0.43	0.43
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.91	< 0.10	0.12	0.24	0.24
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	3.3	< 0.10	0.18	0.44	0.43
Total Of 16 PAH's	N	2800	mg/kg	2.0	200	< 2.0	4.1	14	8.5
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-16145-1
Initial Date of Issue:	06-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	12
Turnaround (Wkdays):	1
Date Approved:	06-May-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	03-May-2022
Date Instructed:	06-May-2022
Results Due:	06-May-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1420835	1420836	1420837	1420838	1420839	1420840	1420841	1420842	1420843
		Client Sample ID.:			AN29-1	AN29-2	AM30-1	AN30-1	AN30-2	AO30-1	A030-2	AM29-1	AM29-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
		Bottom Depth (m):			0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:				NEW-ASB		NEW-ASB			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-			-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected			No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	11	6.6	9.6	9.6	11	13	16	8.7	14
Soil Colour	N	2040		N/A	Brown	Brown	Black	Brown	Brown	Brown	Black	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.3	9.2	10.1	9.9	9.4	9.4	11.1	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	1.4	1.4	< 0.50	< 0.50	0.60	< 0.50	< 0.50	1.4	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.70	0.58	1.0	< 0.50	< 0.50	100	3.1	< 0.50	< 0.50
Iron (Total)	N	2430	mg/kg	100	26000	27000	12000	20000	26000	23000	15000	38000	31000
Arsenic	M	2455	mg/kg	0.5	4.9	3.9	3.0	2.8	8.4	6.9	3.7	4.2	3.4
Cadmium	M	2455	mg/kg	0.10	0.89	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10
Chromium	M	2455	mg/kg	0.5	94	140	5.5	19	24	33	9.0	340	120
Manganese	M	2455	mg/kg	1.0	< 1.0	< 1.0	370	3700	2500	320	650	17000	6200
Copper	M	2455	mg/kg	0.50	16	15	14	12	27	19	16	23	21
Mercury	M	2455	mg/kg	0.05	0.07	0.11	0.06	< 0.05	< 0.05	< 0.05	0.11	0.29	0.12
Nickel	M	2455	mg/kg	0.50	9.1	8.9	5.4	4.9	15	41	6.4	11	10
Lead	M	2455	mg/kg	0.50	140	63	21	12	58	15	66	55	39
Selenium	M	2455	mg/kg	0.25	0.35	1.5	0.58	3.1	2.9	1.8	1.3	1.3	0.60
Vanadium	U	2455	mg/kg	0.5	120	130	8.7	31	20	51	17	380	140
Zinc	M	2455	mg/kg	0.50	690	170	25	39	63	68	37	150	95
Organic Matter	M	2625	%	0.40	21	11	100	6.4	38	< 0.40	100	22	100
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	91	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	270	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145
Quotation No.: Q21-24056					Chemtest Sample ID.:	1420835	1420836	1420837	1420838	1420839	1420840	1420841	1420842	1420843
					Client Sample ID.:	AN29-1	AN29-2	AM30-1	AN30-1	AN30-2	AO30-1	A030-2	AM29-1	AM29-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
					Bottom Depth (m):	0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
					Date Sampled:	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
					Asbestos Lab:		NEW-ASB		NEW-ASB			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	29	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	430	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		0.20	1.2	0.49	1.1	0.12	0.59	0.31	1.9	0.20
Anthracene	M	2800	mg/kg	0.10		< 0.10	0.20	0.15	0.24	< 0.10	0.13	< 0.10	0.35	< 0.10
Fluoranthene	M	2800	mg/kg	0.10		0.16	3.0	0.93	1.7	0.25	1.0	0.47	2.8	1.0
Pyrene	M	2800	mg/kg	0.10		0.15	2.7	0.77	1.5	0.21	0.92	0.43	2.3	1.0
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.12	2.1	0.35	0.70	0.11	0.44	0.20	1.2	0.72
Chrysene	M	2800	mg/kg	0.10		0.15	2.9	0.27	0.76	0.11	0.49	0.21	1.4	0.73
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		< 0.10	3.7	0.54	0.91	0.18	0.61	0.27	1.5	1.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		< 0.10	1.3	0.18	0.32	< 0.10	0.21	< 0.10	0.57	0.40
Benzo[a]pyrene	M	2800	mg/kg	0.10		< 0.10	2.6	0.42	0.75	0.13	0.54	0.24	1.3	0.91
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	1.6	< 0.10	0.47	< 0.10	< 0.10	< 0.10	0.80	0.85
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.26
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	1.9	< 0.10	0.52	< 0.10	< 0.10	< 0.10	0.81	0.92
Total Of 16 PAH's	N	2800	mg/kg	2.0		< 2.0	24	4.1	9.0	< 2.0	4.9	2.1	15	8.1
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16145	22-16145	22-16145
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1420844	1420845	1420846
		Client Sample ID.:			AP30-1	AP30-2	AP31-1
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			0.7	1.7	1.5
		Bottom Depth (m):			0.7	1.7	1.5
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:				NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A		-	-
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.6	5.3	7.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	10.2	11.5
Cyanide (Total)	M	2300	mg/kg	0.50	2.7	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Iron (Total)	N	2430	mg/kg	100	41000	15000	46000
Arsenic	M	2455	mg/kg	0.5	5.6	11	8.8
Cadmium	M	2455	mg/kg	0.10	0.58	0.25	0.38
Chromium	M	2455	mg/kg	0.5	480	25	270
Manganese	M	2455	mg/kg	1.0	20000	1400	25000
Copper	M	2455	mg/kg	0.50	27	16	46
Mercury	M	2455	mg/kg	0.05	0.17	0.09	< 0.05
Nickel	M	2455	mg/kg	0.50	17	17	30
Lead	M	2455	mg/kg	0.50	40	68	84
Selenium	M	2455	mg/kg	0.25	1.4	1.3	1.3
Vanadium	U	2455	mg/kg	0.5	480	17	470
Zinc	M	2455	mg/kg	0.50	120	90	130
Organic Matter	M	2625	%	0.40	7.4	13	3.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	120	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	120	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16145	22-16145	22-16145
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1420844	1420845	1420846
			Client Sample ID.:		AP30-1	AP30-2	AP31-1
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.7	1.7	1.5
			Bottom Depth (m):		0.7	1.7	1.5
			Date Sampled:		28-Apr-2022	28-Apr-2022	28-Apr-2022
			Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	74	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	74	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	190	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.17	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.76	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10	0.75	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	0.53	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	0.49	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.75	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.29	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	0.67	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	0.43	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.11	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	0.49	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	5.4	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-16610-1
Initial Date of Issue:	11-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	11-May-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-May-2022
Date Instructed:	06-May-2022
Results Due:	12-May-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-	-		-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.4	6.1	9.9	11	9.6	6.1	8.9	6.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Roots and Stones	Stones and Roots	Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.2	8.9	8.7	8.8	8.8	8.6	8.6	8.6
Cyanide (Total)	M	2300	mg/kg	0.50	5.7	3.8	0.70	< 0.50	0.50	< 0.50	< 0.50	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.4	5.0	9.3	4.3	4.5	7.2	7.8	66
Iron (Total)	N	2430	mg/kg	100	33000	53000	37000	39000	32000	44000	27000	28000
Arsenic	M	2455	mg/kg	0.5	6.7	14	31	7.2	4.8	7.5	12	6.0
Cadmium	M	2455	mg/kg	0.10	0.45	1.4	0.61	0.91	0.52	0.47	0.26	0.18
Chromium	M	2455	mg/kg	0.5	26	55	51	100	49	97	22	19
Manganese	M	2455	mg/kg	1.0	2300	3300	6400	4900	2400	4800	920	1000
Copper	M	2455	mg/kg	0.50	15	19	27	23	15	20	17	11
Mercury	M	2455	mg/kg	0.05	0.32	0.46	0.28	0.32	0.23	0.25	0.21	0.20
Nickel	M	2455	mg/kg	0.50	13	19	25	17	11	19	12	12
Lead	M	2455	mg/kg	0.50	52	320	57	190	72	68	26	33
Selenium	M	2455	mg/kg	0.25	2.1	2.0	1.4	1.5	1.2	1.6	1.4	1.2
Vanadium	U	2455	mg/kg	0.5	44	110	80	160	88	120	28	25
Zinc	M	2455	mg/kg	0.50	140	630	150	500	220	170	48	62
Organic Matter	M	2625	%	0.40	7.9	21	24	13	31	28	38	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	7.3	< 1.0	< 1.0	11	10	10	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	53	< 1.0	< 1.0	230	140	60	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	60	< 5.0	< 5.0	240	150	71	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	5.9	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	39	< 1.0	< 1.0	< 1.0	66	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	55	< 5.0	< 5.0	< 5.0	72	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	60	55	< 10	240	150	140	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	6.5	17	12	4.6	9.6	11	8.4	5.5
Acenaphthylene	N	2800	mg/kg	0.10	0.51	3.0	0.72	0.31	1.0	1.7	0.32	0.95
Acenaphthene	M	2800	mg/kg	0.10	0.20	0.47	0.22	0.15	0.27	0.35	0.24	0.18
Fluorene	M	2800	mg/kg	0.10	0.52	2.1	0.53	0.15	0.78	1.2	0.28	0.13
Phenanthrene	M	2800	mg/kg	0.10	3.9	14	3.3	1.2	6.5	10	1.8	0.89
Anthracene	M	2800	mg/kg	0.10	0.71	3.5	0.97	0.28	2.1	3.3	0.41	0.37
Fluoranthene	M	2800	mg/kg	0.10	4.8	25	6.6	2.4	15	24	2.4	4.3
Pyrene	M	2800	mg/kg	0.10	3.5	18	4.8	2.0	11	16	1.8	3.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.1	11	3.6	1.4	6.6	13	1.2	2.9
Chrysene	M	2800	mg/kg	0.10	2.6	10	3.2	1.4	6.6	13	0.96	2.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.1	14	5.8	2.8	9.5	19	1.9	6.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.2	4.6	2.0	0.70	3.4	6.3	0.63	1.9
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.3	12	4.4	2.1	7.8	14	1.2	5.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.1	8.7	3.9	2.2	6.6	13	1.4	5.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.34	1.1	0.50	0.27	0.88	2.2	0.24	0.79
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.7	5.9	2.9	1.4	4.6	8.3	0.97	4.0
Total Of 16 PAH's	N	2800	mg/kg	2.0	36	150	55	23	92	160	24	45
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020	0.24	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.3
Electrical Conductivity	U	1020	µS/cm	1.0	800
Suspended Solids At 105C	U	1030	mg/l	5.0	180
Total Dissolved Solids	N	1020	mg/l	1.0	520
Turbidity	N	1060	NTU	1.0	260
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	22
Dissolved Oxygen	N	1150	mg O2/l	0.50	3.4
Redox Potential	N	1170	mV	N/A	150
Chloride	U	1220	mg/l	1.0	66
Fluoride	U	1220	mg/l	0.050	0.54
Ammoniacal Nitrogen	U	1220	mg/l	0.050	2.6
Phosphorus (Total)	N	1220	mg/l	0.020	0.040
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.039
Sulphur	N	1220	mg/l	1.0	43
Sulphate	U	1220	mg/l	1.0	130
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	64
Magnesium	U	1455	mg/l	0.20	13
Total Calcium	N	1455	mg/l	5.0	64
Total Magnesium	N	1455	mg/l	0.50	13
Total Hardness as CaCO3	U	1270	mg/l	15	210
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.6
Boron (Dissolved)	U	1455	µg/l	10.0	130
Barium (Dissolved)	U	1455	µg/l	5.00	68
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	1.2
Copper (Dissolved)	U	1455	µg/l	0.50	1.6
Iron (Dissolved)	N	1455	µg/l	5.0	35
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	420
Nickel (Dissolved)	U	1455	µg/l	0.50	1.9
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.55

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	< 0.50
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.8
Zinc (Dissolved)	U	1455	µg/l	2.5	2.9
Arsenic (Total)	N	1455	µg/l	0.20	3.3
Boron (Total)	N	1455	µg/l	10.0	210
Barium (Total)	N	1455	µg/l	5.00	72
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	0.21
Chromium (Total)	N	1455	µg/l	0.50	1.5
Copper (Total)	N	1455	µg/l	0.50	4.2
Iron (Total)	N	1455	µg/l	5.0	590
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	440
Nickel (Total)	N	1455	µg/l	0.50	3.4
Lead (Total)	N	1455	µg/l	0.50	7.9
Antimony (Total)	N	1455	µg/l	0.50	0.77
Selenium (Total)	N	1455	µg/l	0.50	0.88
Vanadium (Total)	N	1455	µg/l	0.50	8.8
Zinc (Total)	N	1455	µg/l	2.5	40
Chromium (Hexavalent)	U	1490	µg/l	20	89
Dissolved Organic Carbon	U	1610	mg/l	2.0	8.0
Total Inorganic Carbon	N	1220	mg/l	2.5	38
Total Organic Carbon	U	1610	mg/l	2.0	8.7
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	130
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	130
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	130
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-16661-2		
Initial Date of Issue:	13-May-2022	**Date of Re-Issue:**	19-May-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	06-May-2022
Order No.:	PO115623	**Date Instructed:**	06-May-2022
No. of Samples:	7		
Turnaround (Wkdays):	12	**Results Due:**	23-May-2022
Date Approved:	19-May-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16661	22-16661	22-16661	22-16661	22-16661	22-16661	22-16661
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1423051	1423052	1423053	1423054	1423055	1423056	1423057
Order No.: PO115623		Client Sample Ref.:			R152-1	R152-2	R158-1	R158-2	R159-1	R159-2	R160-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type	U	2192		N/A	-		-		-		Fibres/Clumps
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Chrysotile
Asbestos by Gravimetry	U	2192	%	0.001							0.006
Total Asbestos	U	2192	%	0.001							0.006
Moisture	N	2030	%	0.020	5.0	8.9	8.0	10	6.0	6.9	7.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.2	8.8	8.6	8.5	8.8	9.5
Cyanide (Total)	M	2300	mg/kg	0.50	5.6	3.5	0.50	< 0.50	< 0.50	< 0.50	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	3.0	13	0.52	1.3	2.3	3.9	2.6
Iron (Total)	N	2430	mg/kg	100	34000	36000	60000	60000	57000	45000	46000
Arsenic	M	2455	mg/kg	0.5	3.1	3.8	28	21	21	12	7.7
Cadmium	M	2455	mg/kg	0.10	0.15	0.17	0.16	0.11	0.15	0.51	1.1
Chromium	M	2455	mg/kg	0.5	180	120	17	19	12	100	63
Manganese	M	2455	mg/kg	1.0	13000	7600	16000	10000	7000	5500	5300
Copper	M	2455	mg/kg	0.50	12	12	81	67	70	27	19
Mercury	M	2455	mg/kg	0.05	0.05	< 0.05	7.3	4.0	4.5	0.32	0.19
Nickel	M	2455	mg/kg	0.50	11	14	6.3	6.6	7.1	25	16
Lead	M	2455	mg/kg	0.50	12	21	110	78	58	58	240
Selenium	M	2455	mg/kg	0.25	0.86	1.5	0.70	0.59	1.3	2.3	2.3
Vanadium	U	2455	mg/kg	0.5	200	120	21	21	19	76	91
Zinc	M	2455	mg/kg	0.50	52	68	88	68	64	170	460
Organic Matter	M	2625	%	0.40	4.1	5.5	0.86	1.2	1.5	9.0	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	200	180
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	200	180
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16661	22-16661	22-16661	22-16661	22-16661	22-16661	22-16661
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1423051	1423052	1423053	1423054	1423055	1423056	1423057
Order No.: PO115623		Client Sample Ref.:			R152-1	R152-2	R158-1	R158-2	R159-1	R159-2	R160-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	50	22	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	290	52	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	340	74	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	340	74	< 10	< 10	< 10	200	180
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	160	240	74
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	22	6.2	11
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	33	6.1	1.7
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	36	5.7	3.9
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.2	3.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	2.5	< 0.10	< 0.10	< 0.10	< 0.10	4.8	5.6
Acenaphthylene	N	2800	mg/kg	0.10	4.2	< 0.10	< 0.10	< 0.10	< 0.10	0.67	1.5
Acenaphthene	M	2800	mg/kg	0.10	0.36	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.49
Fluorene	M	2800	mg/kg	0.10	2.3	< 0.10	< 0.10	< 0.10	< 0.10	0.84	1.7
Phenanthrene	M	2800	mg/kg	0.10	26	0.26	0.31	0.37	0.29	4.7	12
Anthracene	M	2800	mg/kg	0.10	6.3	< 0.10	0.12	0.11	0.13	1.3	2.5
Fluoranthene	M	2800	mg/kg	0.10	44	0.34	0.39	0.59	0.32	8.4	20
Pyrene	M	2800	mg/kg	0.10	31	0.27	0.33	0.47	0.26	6.0	15
Benzo[a]anthracene	M	2800	mg/kg	0.10	16	0.15	0.21	0.24	< 0.10	4.1	8.8
Chrysene	M	2800	mg/kg	0.10	18	0.17	0.26	0.21	< 0.10	4.0	8.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	21	< 0.10	0.43	0.41	< 0.10	6.1	13
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	7.8	< 0.10	0.14	0.14	< 0.10	1.8	4.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	15	< 0.10	0.27	0.30	< 0.10	4.2	9.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	10	< 0.10	0.35	< 0.10	< 0.10	3.1	6.7
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	2.1	< 0.10	0.13	< 0.10	< 0.10	0.62	1.4
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	9.6	< 0.10	0.24	< 0.10	< 0.10	2.8	5.7
Total Of 16 PAH's	N	2800	mg/kg	2.0	220	< 2.0	3.2	2.8	< 2.0	54	120
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-18735-2		
Initial Date of Issue:	25-May-2022	**Date of Re-Issue:**	15-Jun-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	20-May-2022
Order No.:	PO115623	**Date Instructed:**	20-May-2022
No. of Samples:	13		
Turnaround (Wkdays):	3	**Results Due:**	24-May-2022
Date Approved:	25-May-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1432298	1432299	1432300	1432301	1432302	1432303	1432304	1432305	1432306
		Client Sample ID.:			AO22-1	AO24-1	AO23-1	AO25-1	AP25-1	AP26-1	AO26-1	AP23-1	AP24-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	1.00	1.50	1.00	1.70	1.70	1.80	1.50	0.90
		Date Sampled:			18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	18	7.5	9.6	8.3	6.9	10	7.4	22	11
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Roots and Stones	Stones	Roots and Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.9	> 12.0	8.7	> 12.0	9.4	11.8	9.2	8.5	9.4
Cyanide (Total)	M	2300	mg/kg	0.50	37	< 0.50	700	0.90	8.3	1.4	< 0.50	4.1	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	42	0.61	19	0.58	28	1.4	5.4	180	4.2
Iron (Total)	N	2430	mg/kg	100	99000	76000	88000	77000	100000	73000	54000	15000	67000
Arsenic	M	2455	mg/kg	0.5	6.9	2.5	6.1	2.7	7.9	4.4	4.0	4.8	3.7
Cadmium	M	2455	mg/kg	0.10	0.18	0.14	0.26	0.18	0.26	0.23	0.28	0.24	0.24
Chromium	M	2455	mg/kg	0.5	46	150	54	170	52	130	71	11	80
Manganese	M	2455	mg/kg	1.0	3300	11000	4000	13000	3000	9700	4300	230	5700
Copper	M	2455	mg/kg	0.50	13	16	16	18	16	15	10	6.7	13
Mercury	M	2455	mg/kg	0.05	0.24	0.05	0.11	0.05	0.20	0.25	0.06	< 0.05	0.15
Nickel	M	2455	mg/kg	0.50	17	11	19	16	20	12	9.6	9.4	9.9
Lead	M	2455	mg/kg	0.50	33	24	29	23	34	35	37	17	53
Selenium	M	2455	mg/kg	0.25	0.73	1.2	0.62	1.2	0.77	0.67	0.46	0.46	0.75
Vanadium	U	2455	mg/kg	0.5	120	570	140	610	110	530	190	15	340
Zinc	M	2455	mg/kg	0.50	83	42	79	44	74	120	120	39	110
Organic Matter	M	2625	%	0.40	17	2.1	19	2.1	26	5.2	21	7.1	9.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	150	250	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	150	250	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1432298	1432299	1432300	1432301	1432302	1432303	1432304	1432305	1432306
			Client Sample ID.:		AO22-1	AO24-1	AO23-1	AO25-1	AP25-1	AP26-1	AO26-1	AP23-1	AP24-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	1.00	1.50	1.00	1.70	1.70	1.80	1.50	0.90
			Date Sampled:		18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	48	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	71	< 1.0	< 1.0	< 1.0	42	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	83	< 5.0	< 5.0	< 5.0	100	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	83	< 10	150	250	100	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.0	0.98	< 0.10	1.7	< 0.10	15	24	< 0.10	18
Acenaphthylene	N	2800	mg/kg	0.10	0.21	0.11	< 0.10	0.16	< 0.10	2.2	3.9	< 0.10	3.2
Acenaphthene	M	2800	mg/kg	0.10	0.38	0.58	< 0.10	1.1	< 0.10	0.59	0.73	< 0.10	0.96
Fluorene	M	2800	mg/kg	0.10	0.31	0.23	< 0.10	0.50	< 0.10	2.4	2.6	< 0.10	2.9
Phenanthrene	M	2800	mg/kg	0.10	1.6	6.7	2.7	9.5	0.61	24	17	< 0.10	22
Anthracene	M	2800	mg/kg	0.10	0.34	0.57	0.43	1.1	0.11	4.3	4.6	< 0.10	5.5
Fluoranthene	M	2800	mg/kg	0.10	2.1	7.2	2.7	13	0.79	34	26	0.32	36
Pyrene	M	2800	mg/kg	0.10	1.6	5.8	2.1	11	0.65	24	18	0.24	26
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.99	3.2	1.0	6.7	0.30	12	11	< 0.10	14
Chrysene	M	2800	mg/kg	0.10	0.92	4.0	1.1	8.0	0.34	12	12	< 0.10	15
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6	5.9	1.3	12	0.58	16	15	< 0.10	20
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.51	2.2	0.38	4.7	0.21	5.4	5.2	< 0.10	6.8
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.99	4.6	1.0	11	0.34	12	10	< 0.10	15
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.88	3.7	0.68	7.8	0.35	8.9	7.6	< 0.10	11
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.15	0.62	0.12	1.4	0.10	1.8	1.5	< 0.10	2.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.83	3.6	0.69	7.9	0.35	8.1	6.7	< 0.10	9.7
Total Of 16 PAH's	N	2800	mg/kg	2.0	16	50	14	98	4.7	180	170	< 2.0	210
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1432307	1432308	1432309	1432310
		Client Sample ID.:			AO28-1	AN28-1	AP28-1	AQ28-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.60	1.20	0.80	1.00
		Date Sampled:			18-May-2022	18-May-2022	18-May-2022	18-May-2022
		Asbestos Lab:				DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A		-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	9.1	11	10	8.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Roots and Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.0	8.8	8.9	8.9
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	0.60	0.60	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	2.9	0.93	1.4
Iron (Total)	N	2430	mg/kg	100	26000	4500	59000	53000
Arsenic	M	2455	mg/kg	0.5	2.2	0.6	2.5	1.9
Cadmium	M	2455	mg/kg	0.10	0.14	< 0.10	0.12	< 0.10
Chromium	M	2455	mg/kg	0.5	14	5.4	88	92
Manganese	M	2455	mg/kg	1.0	2000	230	4200	3900
Copper	M	2455	mg/kg	0.50	4.6	3.1	11	8.2
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	0.06	< 0.05
Nickel	M	2455	mg/kg	0.50	3.7	1.3	6.1	5.3
Lead	M	2455	mg/kg	0.50	19	4.0	20	13
Selenium	M	2455	mg/kg	0.25	1.4	< 0.25	0.43	0.61
Vanadium	U	2455	mg/kg	0.5	31	5.4	99	82
Zinc	M	2455	mg/kg	0.50	60	13	64	43
Organic Matter	M	2625	%	0.40	28	93	33	64
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	39
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	39
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	190

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1432307	1432308	1432309	1432310
		Client Sample ID.:			AO28-1	AN28-1	AP28-1	AQ28-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.60	1.20	0.80	1.00
		Date Sampled:			18-May-2022	18-May-2022	18-May-2022	18-May-2022
		Asbestos Lab:				DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	13	3400
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	4500
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	810
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	13	8900
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	13	9000
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.4	4.9	7.3	4.0
Acenaphthylene	N	2800	mg/kg	0.10	0.13	0.29	3.2	0.34
Acenaphthene	M	2800	mg/kg	0.10	0.18	0.55	0.51	0.34
Fluorene	M	2800	mg/kg	0.10	0.20	0.67	1.7	0.35
Phenanthrene	M	2800	mg/kg	0.10	1.2	5.8	17	2.9
Anthracene	M	2800	mg/kg	0.10	0.29	0.95	5.2	0.66
Fluoranthene	M	2800	mg/kg	0.10	1.5	3.8	26	3.7
Pyrene	M	2800	mg/kg	0.10	1.3	2.9	20	3.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.69	1.8	9.1	2.1
Chrysene	M	2800	mg/kg	0.10	0.67	1.9	10	2.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.98	2.2	14	3.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.32	0.65	4.5	1.1
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.60	1.4	10	2.7
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.48	0.88	7.9	2.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.16	0.27	1.4	0.41
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.53	0.90	7.5	2.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	11	30	150	32
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-19583-1
Initial Date of Issue:	01-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	10
Turnaround (Wkdays):	5
Date Approved:	01-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	26-May-2022
Date Instructed:	26-May-2022
Results Due:	01-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
		Sample Location:			5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		Fibres/Clumps		Fibres/Clumps	-		-		-
Asbestos Identification	U	2192		N/A		Chrysotile		Chrysotile	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	22	15	8.9	9.5	25	15	16	13	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.1	10.4	9.4	9.2	8.1	9.5	8.6	10.0	8.3
Cyanide (Total)	M	2300	mg/kg	0.50	4.3	7.0	4.5	5.7	< 0.50	< 0.50	< 0.50	< 0.50	1.4
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	22	21	21	17	50	2.9	22	2.7	33
Iron (Total)	N	2430	mg/kg	100	29000	30000	27000	26000	22000	32000	33000	29000	22000
Arsenic	M	2455	mg/kg	0.5	10	8.1	7.2	7.0	14	17	10	15	8.8
Cadmium	M	2455	mg/kg	0.10	0.34	0.45	0.29	0.32	< 0.10	0.24	0.25	0.12	0.18
Chromium	M	2455	mg/kg	0.5	34	26	31	26	28	39	18	37	12
Manganese	M	2455	mg/kg	1.0	1800	1600	1500	1300	370	3900	1200	3200	580
Copper	M	2455	mg/kg	0.50	21	19	18	20	8.4	21	20	7.7	17
Mercury	M	2455	mg/kg	0.05	0.35	0.60	0.44	0.63	< 0.05	0.18	0.07	0.05	0.10
Nickel	M	2455	mg/kg	0.50	22	20	18	20	25	17	20	15	20
Lead	M	2455	mg/kg	0.50	55	82	42	54	18	45	48	21	33
Selenium	M	2455	mg/kg	0.25	1.2	1.1	0.99	0.87	0.86	2.9	1.7	2.0	3.5
Vanadium	U	2455	mg/kg	0.5	46	35	37	32	34	90	44	78	27
Zinc	M	2455	mg/kg	0.50	120	140	100	120	58	96	94	61	47
Organic Matter	M	2625	%	0.40	12	14	8.5	17	1.6	3.1	8.3	2.2	5.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	11	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	8.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	91	< 1.0	< 1.0	< 1.0	< 1.0	150	61	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	150	61	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	5.6	< 1.0	4.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	180	< 1.0	200	< 1.0	< 1.0	630	140	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
		Sample Location:			5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	200	< 5.0	220	< 5.0	< 5.0	630	140	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	350	< 10	220	< 10	< 10	780	200	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.2	3.9	4.2	5.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.22	0.35	0.40	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.11	0.13	0.17	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.22	0.32	0.19	0.44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.3	1.7	2.1	2.8	< 0.10	< 0.10	0.68	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.48	1.7	0.63	0.59	< 0.10	< 0.10	0.14	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	2.0	2.3	3.2	4.5	< 0.10	0.89	0.43	0.40	0.28
Pyrene	M	2800	mg/kg	0.10	1.4	1.6	2.3	3.3	< 0.10	0.65	0.38	0.31	0.17
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0	1.0	1.4	2.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.97	1.3	1.7	2.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.1	1.9	2.0	3.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.57	1.7	0.71	0.99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.86	1.2	1.6	2.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.63	0.82	1.2	2.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.15	0.21	0.29	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.58	1.1	1.0	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	15	21	23	34	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Moisture	N	2030	%	0.020	12
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
pH	M	2010		4.0	9.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.6
Iron (Total)	N	2430	mg/kg	100	36000
Arsenic	M	2455	mg/kg	0.5	21
Cadmium	M	2455	mg/kg	0.10	0.28
Chromium	M	2455	mg/kg	0.5	41
Manganese	M	2455	mg/kg	1.0	3700
Copper	M	2455	mg/kg	0.50	23
Mercury	M	2455	mg/kg	0.05	0.26
Nickel	M	2455	mg/kg	0.50	20
Lead	M	2455	mg/kg	0.50	71
Selenium	M	2455	mg/kg	0.25	1.4
Vanadium	U	2455	mg/kg	0.5	100
Zinc	M	2455	mg/kg	0.50	150
Organic Matter	M	2625	%	0.40	7.4
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	4.7
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	15
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	51
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	71
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	140

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	210
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.1
Acenaphthylene	N	2800	mg/kg	0.10	0.22
Acenaphthene	M	2800	mg/kg	0.10	0.29
Fluorene	M	2800	mg/kg	0.10	0.29
Phenanthrene	M	2800	mg/kg	0.10	1.9
Anthracene	M	2800	mg/kg	0.10	0.36
Fluoranthene	M	2800	mg/kg	0.10	1.8
Pyrene	M	2800	mg/kg	0.10	1.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0
Chrysene	M	2800	mg/kg	0.10	0.94
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.63
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.71
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.12
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.75
Total Of 16 PAH's	N	2800	mg/kg	2.0	15
Resorcinol	M	2920	mg/kg	0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20454-1
Initial Date of Issue:	09-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson Caitlin Davies David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	23
Turnaround (Wkdays):	5
Date Approved:	09-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	01-Jun-2022
Date Instructed:	01-Jun-2022
Results Due:	09-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440189	1440190	1440191	1440192	1440193	1440194	1440195	1440196	1440197
		Client Sample ID.:			AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2	AX34-1	AX34-2	AW37-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	2.00	0.60	1.50	0.50	1.20	0.70	1.30	0.30
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	8.5	9.7	4.0	7.4	7.3	9.1	4.2	6.6	5.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand
pH	M	2010		4.0	9.7	8.8	9.4	10.4	9.3	10.0	10.5	9.7	11.6
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.3	23	1.9	4.4	2.0	29	0.56	20	0.67
Iron (Total)	N	2430	mg/kg	100	3500	8200	2200	4800	3900	6000	< 100	8800	17000
Arsenic	M	2455	mg/kg	0.5	2.7	1.2	2.0	< 0.5	2.3	1.5	< 0.5	1.3	1.4
Cadmium	M	2455	mg/kg	0.10	0.25	0.24	< 0.10	< 0.10	0.16	0.55	< 0.10	0.38	0.59
Chromium	M	2455	mg/kg	0.5	8.7	7.8	4.3	2.8	5.2	7.5	0.5	8.7	160
Manganese	M	2455	mg/kg	1.0	1300	840	450	530	750	1100	1700	680	6700
Copper	M	2455	mg/kg	0.50	10	6.3	6.7	1.6	6.9	5.4	0.93	4.8	9.3
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	4.7	7.2	4.1	0.88	4.4	3.6	1.2	6.9	3.2
Lead	M	2455	mg/kg	0.50	19	24	8.8	2.2	6.3	37	2.5	18	25
Selenium	M	2455	mg/kg	0.25	0.72	0.26	< 0.25	< 0.25	0.41	0.56	0.76	< 0.25	0.31
Vanadium	U	2455	mg/kg	0.5	18	9.5	8.1	6.0	11	14	< 0.5	27	110
Zinc	M	2455	mg/kg	0.50	26	23	18	3.9	13	38	4.9	24	91
Organic Matter	M	2625	%	0.40	8.1	4.1	3.6	5.0	9.0	3.3	6.7	2.1	1.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.1

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1440189	1440190	1440191	1440192	1440193	1440194	1440195	1440196	1440197
			Client Sample ID.:		AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2	AX34-1	AX34-2	AW37-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	2.00	0.60	1.50	0.50	1.20	0.70	1.30	0.30
			Date Sampled:		30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	44
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	49
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	49
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.47
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.34
Phenanthrene	M	2800	mg/kg	0.10	0.52	0.61	< 0.10	0.51	0.32	0.42	0.29	< 0.10	3.0
Anthracene	M	2800	mg/kg	0.10	0.33	0.24	< 0.10	0.15	0.12	< 0.10	< 0.10	< 0.10	1.1
Fluoranthene	M	2800	mg/kg	0.10	0.94	0.53	< 0.10	0.81	0.32	0.29	0.74	< 0.10	8.0
Pyrene	M	2800	mg/kg	0.10	0.77	0.48	< 0.10	0.63	0.28	0.25	0.67	< 0.10	7.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.61	0.45	< 0.10	0.32	< 0.10	< 0.10	0.44	< 0.10	5.4
Chrysene	M	2800	mg/kg	0.10	0.46	0.40	< 0.10	0.45	< 0.10	< 0.10	0.35	< 0.10	6.3
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.87	0.50	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10	9.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.33	0.38	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10	4.0
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.43	0.31	< 0.10	< 0.10	< 0.10	< 0.10	0.20	< 0.10	8.2
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.43	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.32	0.31	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.74
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.68	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	6.7	5.1	< 2.0	2.9	< 2.0	< 2.0	3.3	< 2.0	65
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440198	1440199	1440200	1440201	1440202	1440203	1440204	1440205	1440206
		Client Sample ID.:			AW37-2	AW36-1	AW36-2	AW35-1	AW34-1	AW34-2	AV34-1	AV34-2	AV35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.50	0.30	1.60	0.50	1.00	2.00	0.40	1.80	1.00
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-	-		-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	11	6.6	12	5.8	13	10	6.3	13	8.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand
pH	M	2010		4.0	11.1	10.2	9.5	10.8	9.8	10.8	10.5	10.1	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	1.5	4.0	5.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	< 0.50	26	0.61	1.5	0.78	1.1	2.3	0.78
Iron (Total)	N	2430	mg/kg	100	9800	15000	13000	6500	5400	5500	7800	6200	4900
Arsenic	M	2455	mg/kg	0.5	18	2.4	6.1	2.4	2.6	1.9	3.1	2.0	1.9
Cadmium	M	2455	mg/kg	0.10	0.26	0.22	0.24	0.31	0.34	0.14	0.11	0.28	0.35
Chromium	M	2455	mg/kg	0.5	32	85	12	24	15	13	23	13	12
Manganese	M	2455	mg/kg	1.0	2200	3200	810	2400	2100	2200	3000	1900	2000
Copper	M	2455	mg/kg	0.50	12	9.9	13	7.1	12	7.1	7.7	9.9	6.4
Mercury	M	2455	mg/kg	0.05	0.07	0.07	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	7.3	2.7	8.2	3.1	5.8	3.3	4.7	5.6	3.6
Lead	M	2455	mg/kg	0.50	30	31	41	43	45	16	24	40	33
Selenium	M	2455	mg/kg	0.25	1.2	0.27	0.47	1.0	0.66	1.3	1.5	0.73	0.48
Vanadium	U	2455	mg/kg	0.5	80	67	19	29	26	20	36	23	17
Zinc	M	2455	mg/kg	0.50	59	99	62	110	90	41	54	180	76
Organic Matter	M	2625	%	0.40	8.1	5.7	7.8	3.8	15	3.3	3.3	7.9	5.0
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	72
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	72
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1440198	1440199	1440200	1440201	1440202	1440203	1440204	1440205	1440206
			Client Sample ID.:		AW37-2	AW36-1	AW36-2	AW35-1	AW34-1	AW34-2	AV34-1	AV34-2	AV35-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.50	0.30	1.60	0.50	1.00	2.00	0.40	1.80	1.00
			Date Sampled:		30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
			Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	57
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	57
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	130
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.47	< 0.10	< 0.10	0.41	0.62	0.60	< 0.10	0.73	1.4
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.12	0.13	0.13	< 0.10	0.37	0.48
Fluoranthene	M	2800	mg/kg	0.10	0.58	0.21	< 0.10	0.32	0.87	0.60	< 0.10	0.71	3.5
Pyrene	M	2800	mg/kg	0.10	0.60	0.29	< 0.10	0.31	0.80	0.59	< 0.10	0.66	2.9
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.37	< 0.10	< 0.10	< 0.10	0.41	0.26	< 0.10	0.61	2.0
Chrysene	M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	< 0.10	0.30	0.35	< 0.10	0.46	1.8
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	< 0.10	0.73	0.30	< 0.10	0.49	3.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.25	< 0.10	< 0.10	< 0.10	0.34	0.17	< 0.10	0.22	1.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	< 0.10	0.28	0.35	< 0.10	0.47	2.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45	2.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	0.45
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.55	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	3.6	< 2.0	< 2.0	< 2.0	4.5	3.4	< 2.0	6.0	24
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	1.2	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440207	1440208	1440209	1440210	1440211
		Client Sample ID.:			AV35-2	AV36-1	AV36-2	AV37-1	AV37-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			2.00	0.30	1.30	0.50	1.60
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A		-		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	9.6	12	7.2	11	6.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.6	10.0	10.3	10.9	11.0
Cyanide (Total)	M	2300	mg/kg	0.50	3.1	8.0	< 0.50	10	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.64	0.58	4.4	1.0	< 0.50
Iron (Total)	N	2430	mg/kg	100	8700	9000	6100	7800	12000
Arsenic	M	2455	mg/kg	0.5	2.0	2.1	1.3	2.3	1.2
Cadmium	M	2455	mg/kg	0.10	0.24	0.37	0.29	< 0.10	0.26
Chromium	M	2455	mg/kg	0.5	22	22	12	35	55
Manganese	M	2455	mg/kg	1.0	3300	2800	3000	2600	3900
Copper	M	2455	mg/kg	0.50	6.1	11	6.0	5.4	5.3
Mercury	M	2455	mg/kg	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	3.6	5.9	3.7	3.9	3.7
Lead	M	2455	mg/kg	0.50	29	38	34	12	25
Selenium	M	2455	mg/kg	0.25	0.29	0.57	0.29	0.81	0.27
Vanadium	U	2455	mg/kg	0.5	27	26	15	35	55
Zinc	M	2455	mg/kg	0.50	110	130	140	25	46
Organic Matter	M	2625	%	0.40	5.3	11	6.6	4.7	2.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	7.3	< 1.0	< 1.0	19
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	14	< 1.0	< 1.0	18
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	16	< 1.0	< 1.0	64
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	140	< 1.0	< 1.0	140
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	170	< 5.0	< 5.0	240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	2.7	< 1.0	< 1.0	11

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440207	1440208	1440209	1440210	1440211
		Client Sample ID.:			AV35-2	AV36-1	AV36-2	AV37-1	AV37-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			2.00	0.30	1.30	0.50	1.60
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	84	< 1.0	< 1.0	120
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	86	< 5.0	< 5.0	130
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	260	< 10	< 10	370
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.43	0.62	< 0.10	0.59
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.15	0.63	< 0.10	2.7
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.15	0.15	< 0.10	0.34
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.19	0.21	< 0.10	0.40
Phenanthrene	M	2800	mg/kg	0.10	1.1	0.86	1.2	0.24	2.9
Anthracene	M	2800	mg/kg	0.10	1.5	0.38	0.60	< 0.10	4.3
Fluoranthene	M	2800	mg/kg	0.10	6.8	2.9	3.5	0.20	23
Pyrene	M	2800	mg/kg	0.10	6.7	2.4	3.3	0.19	24
Benzo[a]anthracene	M	2800	mg/kg	0.10	4.7	1.8	2.9	0.14	15
Chrysene	M	2800	mg/kg	0.10	6.4	2.0	3.9	0.17	21
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	9.2	2.3	5.8	0.22	33
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.8	0.80	1.8	0.12	11
Benzo[a]pyrene	M	2800	mg/kg	0.10	7.1	1.9	4.5	0.16	26
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	6.5	1.4	4.2	< 0.10	23
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.0	0.35	0.67	< 0.10	3.9
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	5.8	1.4	4.0	< 0.10	22
Total Of 16 PAH's	N	2800	mg/kg	2.0	60	19	38	< 2.0	210
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	1.1	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20747-1
Initial Date of Issue:	10-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	10-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-Jun-2022
Date Instructed:	06-Jun-2022
Results Due:	10-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651
Order No.: PO115623		Client Sample Ref.:			AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	13	24	1.4	14	22	5.8	18	6.2	19
Soil Colour	N	2040		N/A	Brown	Black	Beige	Brown	Brown	Brown	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.9	9.4	> 12.0	9.6	10.2	10.5	11.5	11.3	10.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	14	4.4	1.3	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	6.6	16	0.93	68	2.4	1.4	2.2	1.3	1.6
Iron (Total)	N	2430	mg/kg	100	21000	19000	4300	17000	26000	26000	24000	24000	23000
Arsenic	M	2455	mg/kg	0.5	12	29	3.1	12	18	13	6.0	7.9	19
Cadmium	M	2455	mg/kg	0.10	0.34	0.26	0.32	0.14	5.1	0.54	0.80	0.57	0.73
Chromium	M	2455	mg/kg	0.5	26	15	15	13	60	36	68	82	150
Manganese	M	2455	mg/kg	1.0	1300	270	430	480	2900	19000	4900	4200	5700
Copper	M	2455	mg/kg	0.50	30	50	10	16	110	16	17	20	83
Mercury	M	2455	mg/kg	0.05	0.13	0.23	< 0.05	0.05	1.7	0.13	0.13	0.26	0.38
Nickel	M	2455	mg/kg	0.50	18	28	5.2	20	44	24	16	17	33
Lead	M	2455	mg/kg	0.50	97	44	17	31	970	41	82	63	160
Selenium	M	2455	mg/kg	0.25	1.9	2.8	0.49	1.3	2.0	2.3	0.64	1.0	2.4
Vanadium	U	2455	mg/kg	0.5	45	26	12	21	49	78	88	81	110
Zinc	M	2455	mg/kg	0.50	160	73	39	33	5700	170	220	140	240
Organic Matter	M	2625	%	0.40	12	22	13	6.2	14	3.8	9.7	4.7	28
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.1	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	80	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	110	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651
Order No.: PO115623		Client Sample Ref.:			AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	110	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	1.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.82	< 0.10	< 0.10	0.38	0.67
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	< 0.10	0.36	0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.17	< 0.10	< 0.10	0.16	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.60	0.21	< 0.10	0.13	1.1	1.4	0.98	2.3	0.67
Anthracene	M	2800	mg/kg	0.10	0.11	< 0.10	< 0.10	< 0.10	0.58	0.31	0.62	0.59	0.14
Fluoranthene	M	2800	mg/kg	0.10	0.55	0.12	< 0.10	0.50	3.4	2.1	4.1	5.7	1.1
Pyrene	M	2800	mg/kg	0.10	0.46	0.12	< 0.10	0.43	4.2	1.5	4.3	4.3	0.77
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	0.26	2.9	0.87	3.1	2.4	0.43
Chrysene	M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	0.29	3.3	0.88	4.8	2.6	0.49
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.70	< 0.10	< 0.10	0.29	7.3	1.5	7.3	3.1	0.73
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.24	< 0.10	< 0.10	< 0.10	2.3	0.53	2.4	1.1	0.24
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.50	< 0.10	< 0.10	0.20	5.4	0.89	5.7	2.1	0.41
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	< 0.10	4.3	0.68	5.4	1.7	0.20
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	< 0.10	0.82	0.18	0.85	0.35	0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	< 0.10	4.6	0.78	5.0	1.6	0.27
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.0	< 2.0	< 2.0	2.1	42	12	45	29	6.4
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20750-1
Initial Date of Issue:	10-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	10-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-Jun-2022
Date Instructed:	06-Jun-2022
Results Due:	10-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441657	1441658	1441659	1441660	1441661	1441662	1441663	1441664	1441665
		Client Sample ID.:			AR35-2	AR35-1	AQ37-2	AR34-2	AR34-1	AQ35-1	AQ37-1	AT37-1	AQ35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.30	0.60	1.50	2.00	0.50	0.50	0.80	0.80	2.00
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	9.2	7.1	8.7	13	8.0	12	13	8.6	21
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.6	9.4	9.2	11.1	11.6	11.0	10.8	> 12.0	9.2
Cyanide (Total)	M	2300	mg/kg	0.50	3.5	3.7	< 0.50	2.7	11	6.9	2.1	5.9	8.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	1.6	16	2.3	0.86	0.74	6.8	0.78	40
Iron (Total)	N	2430	mg/kg	100	22000	23000	19000	15000	22000	20000	15000	21000	22000
Arsenic	M	2455	mg/kg	0.5	15	7.1	12	24	7.0	10	9.3	3.9	17
Cadmium	M	2455	mg/kg	0.10	0.42	0.60	0.45	0.67	0.81	1.1	0.42	0.65	0.19
Chromium	M	2455	mg/kg	0.5	41	54	46	34	100	49	22	230	19
Manganese	M	2455	mg/kg	1.0	2100	3200	2500	2700	4100	1900	1100	9200	620
Copper	M	2455	mg/kg	0.50	35	23	47	20	25	43	23	51	37
Mercury	M	2455	mg/kg	0.05	0.21	0.26	0.11	0.08	0.78	0.61	0.18	0.18	0.18
Nickel	M	2455	mg/kg	0.50	20	18	25	10	16	21	15	16	36
Lead	M	2455	mg/kg	0.50	120	150	52	59	140	180	77	61	30
Selenium	M	2455	mg/kg	0.25	1.2	1.2	1.3	3.1	0.90	1.3	1.3	0.51	2.4
Vanadium	U	2455	mg/kg	0.5	46	46	88	42	83	50	25	330	34
Zinc	M	2455	mg/kg	0.50	220	280	97	150	290	320	110	290	62
Organic Matter	M	2625	%	0.40	15	13	9.1	2.4	6.6	10	8.3	8.3	14
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.7	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1441657	1441658	1441659	1441660	1441661	1441662	1441663	1441664	1441665
					Client Sample ID.:	AR35-2	AR35-1	AQ37-2	AR34-2	AR34-1	AQ35-1	AQ37-1	AT37-1	AQ35-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.30	0.60	1.50	2.00	0.50	0.50	0.80	0.80	2.00
					Date Sampled:	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		12	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		12	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		16	130	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		0.85	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		2.0	4.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		0.16	0.18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		0.36	0.34	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		4.0	2.6	0.58	< 0.10	0.95	< 0.10	< 0.10	0.90	< 0.10
Anthracene	M	2800	mg/kg	0.10		1.6	1.6	0.21	< 0.10	0.21	< 0.10	< 0.10	0.35	< 0.10
Fluoranthene	M	2800	mg/kg	0.10		14	15	0.84	< 0.10	0.99	0.40	0.52	2.0	< 0.10
Pyrene	M	2800	mg/kg	0.10		11	14	0.67	< 0.10	0.85	0.45	0.54	1.9	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10		7.3	11	0.65	< 0.10	0.55	< 0.10	< 0.10	1.5	< 0.10
Chrysene	M	2800	mg/kg	0.10		6.7	11	0.59	< 0.10	0.54	< 0.10	< 0.10	1.3	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		14	28	< 0.10	< 0.10	0.84	< 0.10	< 0.10	1.8	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		4.2	9.2	< 0.10	< 0.10	0.29	< 0.10	< 0.10	0.56	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10		11	22	< 0.10	< 0.10	0.68	< 0.10	< 0.10	2.3	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		10	22	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		2.0	3.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		8.6	18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		98	160	3.5	< 2.0	5.9	< 2.0	< 2.0	13	< 2.0
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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N	Unaccredited
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T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
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Sample Retention and Disposal

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Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20752-1
Initial Date of Issue:	10-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	8
Turnaround (Wkdays):	5
Date Approved:	10-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-Jun-2022
Date Instructed:	06-Jun-2022
Results Due:	10-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441669	1441670	1441671	1441672	1441673	1441674	1441675	1441676
		Client Sample ID.:			AT35-1	AT35-2	AU34-2	AU34-1	AT34-2	AS36-1	AU36-1	AU35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	1.4	2.3	0.5	1.5	1	0.7	0.5
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	10	13	14	6.5	9.5	7.6	6.4	15
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	> 12.0	10.2	10.3	11.2	11.7	11.8	> 12.0
Cyanide (Total)	M	2300	mg/kg	0.50	14	5.4	0.70	1.5	2.7	1.8	18	12
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.0	0.65	12	2.2	0.76	0.58	1.1	2.1
Iron (Total)	N	2430	mg/kg	100	23000	22000	19000	20000	12000	24000	25000	22000
Arsenic	M	2455	mg/kg	0.5	12	8.8	17	8.0	6.9	6.0	5.2	12
Cadmium	M	2455	mg/kg	0.10	1.2	0.77	0.24	0.35	0.22	0.10	0.25	0.33
Chromium	M	2455	mg/kg	0.5	270	110	15	39	34	540	89	29
Manganese	M	2455	mg/kg	1.0	9900	5000	480	2400	2500	14000	4900	2100
Copper	M	2455	mg/kg	0.50	46	37	27	13	16	13	14	22
Mercury	M	2455	mg/kg	0.05	0.29	0.17	0.12	0.11	0.05	< 0.05	0.17	0.43
Nickel	M	2455	mg/kg	0.50	29	38	18	13	16	10	11	22
Lead	M	2455	mg/kg	0.50	170	80	35	41	22	12	32	34
Selenium	M	2455	mg/kg	0.25	0.60	0.51	1.3	0.73	2.7	< 0.25	0.44	0.79
Vanadium	U	2455	mg/kg	0.5	170	76	21	41	36	320	87	33
Zinc	M	2455	mg/kg	0.50	560	210	59	110	48	40	130	120
Organic Matter	M	2625	%	0.40	8.3	7.8	17	6.0	3.3	6.0	2.9	5.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.8	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	32	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	84	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3000	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	630	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3800	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441669	1441670	1441671	1441672	1441673	1441674	1441675	1441676
		Client Sample ID.:			AT35-1	AT35-2	AU34-2	AU34-1	AT34-2	AS36-1	AU36-1	AU35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.5	1.4	2.3	0.5	1.5	1	0.7	0.5
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	500	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	33	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	530	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	4300	< 10
Benzene	M	2760	µg/kg	1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	22
Toluene	M	2760	µg/kg	1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	6.8	< 1.0	5.8
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.9	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.3	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.59	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.56	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	3.1	1.2	< 0.10	0.84	0.37	< 0.10	0.48	0.26
Anthracene	M	2800	mg/kg	0.10	0.82	0.44	< 0.10	0.20	0.21	< 0.10	0.55	0.13
Fluoranthene	M	2800	mg/kg	0.10	7.0	3.2	0.50	1.3	0.69	0.62	1.9	0.84
Pyrene	M	2800	mg/kg	0.10	7.1	3.2	0.62	0.94	0.62	0.57	2.3	0.78
Benzo[a]anthracene	M	2800	mg/kg	0.10	4.0	2.1	0.51	0.86	< 0.10	< 0.10	1.8	0.39
Chrysene	M	2800	mg/kg	0.10	4.2	2.0	0.57	0.59	< 0.10	< 0.10	2.0	0.56
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	7.7	3.6	< 0.10	1.1	< 0.10	< 0.10	4.4	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.7	1.3	< 0.10	0.39	< 0.10	< 0.10	1.5	0.32
Benzo[a]pyrene	M	2800	mg/kg	0.10	6.1	2.5	< 0.10	1.1	< 0.10	< 0.10	3.6	0.69
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	4.9	2.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.72
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.91	0.63	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	4.4	2.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.68
Total Of 16 PAH's	N	2800	mg/kg	2.0	56	24	2.2	7.3	< 2.0	< 2.0	19	6.5
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

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2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix E: Gas Monitoring Data

5E1-WS01

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure (mb)	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
27/09/22	0.9	0.9	0.1	0.0	0.4	0.4	0.0	0.0	0.000	1018.0	1019.0	1005.0	1005	Steady	2.15	2.89	0.00	0
05/10/22	2.5	2.5	0.1	0.1	0.4	0.4	0.0	-0.1	0.000	1020.0	1024.0	1015.0	1006	Rising	2.10	2.89	0.00	1
20/10/22	1.6	1.6	0.0	0.0	0.4	0.4	0.0	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	2.10	2.88	0.00	0
12/10/22	2.0	2.0	0.1	0.0	0.3	0.3	0.0	0.0	0.000	1015.0	1018.0	1025.0	1021	Rising	2.14	2.83	0.00	0
25/10/22	1.4	1.4	0.1	0.1	0.4	0.4	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	2.15	2.85	0.00	0
31/10/22	0.2	0.2	0.1	0.0	0.4	0.4	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Falling	2.04	2.90	0.00	0
25/10/22	1.4	1.4	0.1	0.1	0.4	0.4	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	2.12	2.90	0.00	0
17/11/22	0.2	0.2	0.0	0.0	0.5	0.5	0.1	0.1	0.001	1007.0	992.0	986.0	990	Rising	0.53	2.89	0.00	0
12/06/23	8.5	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.000	1013.0	1013.0	1014.0	1016	Steady	1.24	2.86	0.00	2
18/10/23	15.4	16.7	0.1	0.1	0.5	0.4	0.0	0.0	0.000	1025.0	1020.0	1011.0	994	Falling	0.93	2.86	0.00	0

ining the Gas Screening Value

Maximum Carbon dioxide concentration**	Maximum methane	Maximum flow rate*
0.1	0.5	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0015

5E1-WS03

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
27/09/22	0.5	0.5	0.1	0.1	0.8	0.8	0.0	0.0	0.000	1018.0	1019.0	1005.0	1004	Steady	1.92	3.31	0	1
05/10/22	16.9	16.4	0.0	0.0	0.2	0.2	0.1	0.1	0.000	1020.0	1024.0	1015.0	1008	Rising	1.90	3.31	0	0
20/10/22	7.8	7.8	0.0	0.0	0.3	0.3	0.0	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	1.88	3.31	0	0
12/10/22	6.5	6.5	0.0	0.0	0.2	0.2	0.0	0.0	0.000	1015.0	1018.0	1025.0	1021	Rising	1.96	3.30	0	0
25/10/22	14.0	14.0	0.1	0.1	0.3	0.3	0.1	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	1.81	3.30	0.00	1
31/10/22	15.7	15.7	0.1	0.1	0.4	0.3	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Rising	1.68	3.31	0.00	0
25/10/22	14.0	14.0	0.1	0.1	0.3	0.3	0.1	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	1.81	3.30	1.00	0
17/11/22	15.5	15.5	0.1	0.1	0.3	0.3	0.2	0.0	0.001	1007.0	992.0	986.0	990	Rising	1.26	3.31	0.00	0
23/03/23	19.8	19.9	0.2	0.1	0.1	0.1	0.0	0.3	0.000	1014.0	1006.0	997.0	996	Rising	0.52	3.27	0.00	1
12/06/23	19.9	19.9	0.1	0.1	0.0	0.0	-0.1	-0.1	0.000	1013.0	1013.0	1014.0	1017	Steady	1.17	3.30	0.00	1
18/10/23	19.5	19.5	0.1	0.1	0.5	0.5	-0.7	-0.7	-0.004	1025.0	1020.0	1011.0	990	Falling	0.56	3.25	0.00	0

ining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate*
0.2	0.8	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0024

5E1-WS05

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
29/09/22	6.2	6.2	0.1	0.0	0.2	0.2	0.1	0.0	0.000	1018.0	1019.0	1005.0	1004	Steady	3.10	4.20	0	0
05/10/22	2.6	2.6	0.1	0.0	0.2	0.2	0.2	0.0	0.000	1020.0	1024.0	1015.0	1008	Rising	3.05	4.20	0	0
20/10/22	3.9	3.9	0.0	0.0	0.3	0.2	0.1	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	3.03	4.20	0.00	0
12/10/22	7.1	7.1	0.0	0.0	0.2	0.2	0.0	0.0	0.000	1015.0	1018.0	1025.0	1021	Rising	3.05	4.20	0.00	1
25/10/22	0.9	0.9	0.1	0.1	0.3	0.3	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	3.03	4.20	0.00	0
31/10/22	0.2	0.2	0.0	0.0	0.4	0.4	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Rising	2.95	4.20	0.00	0
25/10/22	0.9	0.9	0.1	0.1	0.3	0.3	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	3.03	4.20	0.00	0
17/11/22	0.3	0.3	0.0	0.0	0.6	0.6	0.0	0.0	0.000	1007.0	992.0	986.0	989	Rising	2.45	4.19	0.00	0
23/03/23	2.3	2.3	0.1	0.0	0.0	0.0	0.1	0.1	0.000	1014.0	1006.0	997.0	998	Rising	1.65	4.19	0.00	1
12/06/23	16.9	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.000	1013.0	1013.0	1014.0	1017	Steady	2.05	4.18	0.00	2
18/10/23	5.8	5.8	0.1	0	0.5	0.5	0.0	0.0	0.000	1025.0	1020.0	1011.0	994	Falling	1.69	4.19	0.00	1

ining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate*
0.1	0.6	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0018

5E1-WS06

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
29/09/2022	0.4	0.4	0.1	0.0	1.6	1.6	0.0	0.0	0.000	1018.0	1019.0	1005.0	1005	Steady	3.65	4.35	0	1
05/10/2022	0.4	0.4	0.0	0.0	1.5	1.5	0.0	-0.1	0.000	1020.0	1024.0	1015.0	1007	Rising	3.60	4.35	0.00	1
20/10/22	2.2	2.2	0.0	0.0	0.8	0.8	0.0	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	3.57	4.34	0.00	0
12/10/22	2.8	2.8	0.0	0.0	1.0	1.0	0.0	0.0	0.000	1015.0	1018.0	1025.0	1021	Rising	3.61	4.36	0.00	2
25/10/22	10.1	10.1	0.1	0.1	0.6	0.6	0.0	0.0	0.000	1007.0	999.0	1002.0	1010	Rising	3.57	4.35	0.00	2
31/10/22	0.5	0.5	0.1	0.0	1.4	1.4	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Falling	3.52	4.35	0.00	1
25/10/22	10.1	10.1	0.1	0.1	0.6	0.6	0.0	0.0	0.000	1007.0	999.0	1002.0	1010	Rising	3.57	4.35	0.00	2
17/11/22	0.4	0.4	0.0	0.0	3.5	3.5	0.1	0.1	0.004	1007.0	992.0	986.0	990	Rising	2.75	4.35	0.00	1
23/03/23	0.1	0.2	0.1	0.0	1.6	1.6	0.2	0.2	0.003	1014.0	1006.0	997.0	998	Rising	2.01	4.33	0.00	1
12/06/23	16.0	16.0	0.0	0.0	0.0	0.0	0.1	0.1	0.000	1013.0	1013.0	1014.0	1017	Steady	2.32	4.33	0.00	1
18/10/23	2.0	2.0	0.1	0.1	0.5	0.5	0.0	0.0	0.000	1025.0	1020.0	1011.0	995	Falling	2.26	4.33	0.00	1

ining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate*
0.1	3.5	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

*** Data extracted from continuous ground gas monitoring, no flow and water level data recorded

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0105

5E1-WS07

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure (mb)	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
29/09/22	0.3	0.3	0.1	0.0	3.0	3.0	0.0	0.0	0.000	1018.0	1019.0	1005.0	1005	Steady	3.24	3.86	0.00	1
05/10/22	0.2	0.2	0.1	0.0	2.9	2.9	0.1	0.1	0.003	1020.0	1024.0	1015.0	1007	Rising	3.20	3.86	0.00	0
20/10/22	0.2	0.2	0.0	0.0	2.9	2.9	0.0	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	3.18	3.85	0.00	1
12/10/22	0.2	0.2	0.0	0.0	2.3	2.3	0.2	0.1	0.005	1015.0	1018.0	1025.0	1020	Rising	2.20	3.87	0.00	1
25/10/22	1.2	1.2	0.1	0.1	2.4	2.4	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	3.16	3.86	0.00	0
31/10/22	0.1	0.1	0.0	0.0	3.4	3.4	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Falling	3.12	3.85	0.00	1
25/10/22	1.2	1.2	0.1	0.1	2.4	2.4	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	3.16	3.85	0.00	1
17/11/22	0.1	0.1	0.1	0.0	4.6	4.6	0.1	0.1	0.005	1007.0	992.0	986.0	989	Rising	2.46	3.85	0.00	0
23/03/23	1.1	1.2	0.1	0.0	0.1	0.1	-0.1	0.0	0.000	1014.0	1006.0	997.0	998	Rising	1.79	3.85	0.00	0
12/06/23	11.6	11.6	0.0	0.0	0.0	0.0	0.1	0.0	0.000	1013.0	1013.0	1014.0	1017	Steady	2.13	3.90	0.00	1
18/10/23	1.4	1.4	0.1	0.0	0.5	0.5	-0.1	0.0	-0.001	1025.0	1020.0	1011.0	994	Falling	2.06	3.85	0.00	1

ining the Gas Screening Value

Maximum Carbon dioxide concentration**	Maximum methane**	Maximum flow rate*
0.1	4.6	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0138

5E1-WS08

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Gas Screening Value	3 Days preceding Barometric Pressure (mb)			Pressure	Pressure Trend	Water Level (m)	Base Level (m)	H2S (ppm)	CO (ppm)
										3rd	2nd	1st						
	Minimum	Steady	Peak	Steady	Peak	Steady	Peak	Steady									Peak	Peak
29/09/22	5.8	5.8	0.1	0.0	0.2	0.2	0.0	0.0	0.000	1018.0	1019.0	1005.0	1005	Steady	DRY	2.38	0	1
05/09/22	0.7	0.7	0.1	0.0	0.4	0.4	0.0	0.0	0.000	1020.0	1024.0	1015.0	1006	Rising	DRY	2.39	0.00	0
20/10/22	0.5	0.5	0.1	0.1	0.4	0.4	0.0	0.0	0.000	1015.0	1025.0	1016.0	1008	Steady	DRY	2.39	0	1
12/10/22	0.6	0.6	0.1	0.0	0.3	0.3	0.0	0.0	0.000	1015.0	1018.0	1025.0	1021	Rising	DRY	2.38	0	1
25/10/22	0.4	0.4	0.1	0.1	0.3	0.3	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	2.32	2.38	0.00	0
31/10/22	0.3	0.3	0.0	0.0	0.4	0.4	0.0	0.0	0.000	1013.0	1011.0	1012.0	1013	Falling	3.12	3.85	0.00	1
25/10/22	0.4	0.4	0.1	0.1	0.3	0.3	0.0	0.0	0.000	1007.0	999.0	1002.0	1011	Rising	2.32	2.38	0.00	0
17/11/22	1.3	1.3	0.0	0.0	0.3	0.3	-3.1	-3.1	-0.009	1007.0	992.0	986.0	990	Rising	1.31	2.38	0.00	0
23/03/23	2.0	11.6	0.1	0.1	0.2	0.1	-4.0	8.8	-0.008	1014.0	1006.0	997.0	998	Rising	1.34	2.38	0.00	0
12/06/23	9.9	9.9	0.0	0.0	0.0	0.0	0.0	0.0	0.000	1013.0	1013.0	1014.0	1017	Steady	1.94	2.38	0.00	1
18/10/23	0.6	0.6	0.1	0.1	0.5	0.5	-0.1	-0.1	-0.001	1025.0	1020.0	1011.0	993	Falling	1.96	2.39	0.00	0

ining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate*
0.1	0.5	0.3

*0.3 l/hr Flow has been used on any value less than 0.3 l/hr based on gas analyser potential error.

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0015

Appendix F: Permeability

Phase 5E1 Formation Falling Head Tests

Phase 5e1

Test 1 (5E1-INF-1) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	235	0	-	-
3	225	10	3.333333333	5.55556E-05
13	206	29	2.230769231	3.71795E-05
28	206	29	1.035714286	1.72619E-05
570	158	77	0.14	2.25E-06
1510	149	86	0.06	9.49E-07

Test 2 (5E1-INF 2) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	212	0	-	-
13	135	77	5.923076923	9.87179E-05
40	133	79	1.98	3.29E-05
667	131	81	0.12	2.02E-06
1416	130	82	0.06	9.65E-07

Test 3 (INF-3) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	120	0	-	-
28	100	20	0.714285714	1.19048E-05
585	90	30	0.051282051	8.54701E-07

Test 4 (5E1-1NF-4) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	172	0	-	-
15	153	19	1.27	2.11E-05
27	153	19	0.70	1.17E-05
37	153	19	0.51	8.56E-06
126	138	34	0.27	4.50E-06
187	135	37	0.20	3.30E-06
244	135	37	0.15	2.53E-06
856	121	51	0.06	9.93E-07

Test 5 (5E1-1NF-5) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	215	0	-	-
69	182	33	0.48	7.97E-06
129	159	56	0.43	7.24E-06
185	140.5	74.5	0.40	6.71E-06
1335	140	75	0.06	9.36E-07

Test 6 (5E1-1NF-6) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	177	0	-	-
69	128	44	0.64	1.06E-05
128	115	57	0.45	7.42E-06
185	115	57	0.31	5.14E-06
1235	107	65	0.05	8.77E-07

Test 7 (5E1-INF-7) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	139	0	-	-
18	137	2	0.11	1.85E-06
50	135	4	0.08	1.33E-06
93	131	8	0.09	1.43E-06
148	129	10	0.07	1.13E-06
1302	69	70	0.05	8.96E-07

Test 8 (5E1-INF-8) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	154	0	-	-
10	146	8	0.80	1.33E-05
41	131	23	0.56	9.35E-06
87	115	39	0.45	7.47E-06
142	102	52	0.37	6.10E-06
1296	89	65	0.05	8.36E-07

Test 9 (5E1-INF-9) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	130	0	-	-
10	129	0	0.00	0.00E+00
40	123	6	0.15	2.50E-06
83	118	11	0.13	2.21E-06
138	112	17	0.12	2.05E-06
1292	92	37	0.03	4.77E-07

5e1-WS03 - 01/09/2023					
Time (min)	**Break (min)**	**Depth (m bgl)**	**Change (m)**	**Speed (m/s)**	
Initial		1.065			
0		0			
1	1	1.065	1.065	0.01775	
2	1	1.106	0.041	0.000683333	
3	1	1.114	0.008	0.000133333	
4	1	1.145	0.031	0.000516667	
5	1	1.166	0.021	0.00035	
6	1	1.185	0.019	0.000316667	
7	1	1.194	0.009	0.00015	
8	1	1.201	0.007	0.000116667	
9	1	1.207	0.006	0.0001	
10	1	1.21	0.003	5E-05	
20	10	1.225	0.015	2.5E-05	
20	0	1.235	-	-	Test Period
169	149	1.236	0.001	1.12E-07	
251	231	1.236	0.001	7.22E-08	

Intial Water	1.235
Duration	231
Final Water	1.236
Measured Change	0.001
Speed (m/sec)	7.22E-08

5e1-WS06 - 01/09/2023					
Time (min)	**Break**	**Depth (m)**	**Change**	**Speed**	
Initial					
0	0	0			
1	1	1.557	1.557	0.02595	
2	1	1.986	0.429	0.00715	
3	1	2.2	0.214	0.003566667	
4	1	2.377	0.177	0.00295	
5	1	2.416	0.039	0.00065	
6	1	2.435	0.019	0.000316667	
7	1	2.444	0.009	0.00015	
8	1	2.449	0.005	8.33333E-05	
9	1	2.45	0.001	1.66667E-05	
10	0	2.454	-	-	Test Period
31	21	2.475	0.021	1.67E-05	
59	28	2.477	0.002	1.19E-06	
93	34	2.478	0.001	4.90E-07	
180	87	2.48	0.002	3.83E-07	

Intial Water	2.454
Duration	87
Final Water	2.48
Measured Change	0.002

Speed (m/sec)	3.83E-07

5e1-WS07 - 01/09/2023					
Time (min)	Break	Depth (m)	Change	Speed	
Initial					
0	0	2.025			
1	1	2.2	0.175	0.002916667	
2	1	2.23	0.03	0.0005	
3	1	2.244	0.014	0.000233333	
4	1	2.255	0.011	0.000183333	
5	1	2.26	0.005	8.33333E-05	
6	1	2.264	0.004	6.66667E-05	
7	1	2.267	0.003	5E-05	
8	1	2.27	0.003	5E-05	
9	1	2.272	0.002	3.33333E-05	
10	0	2.273	-	-	Test Period
24	14	2.278	0.005	5.95E-06	
61	51	2.28	0.007	2.29E-06	
118	108	2.281	0.008	1.23E-06	
180	170	2.283	0.01	9.80E-07	

Intial Water	2.273
Duration	170
Final Water	2.283
Measured Change	0.01
Speed (m/sec)	9.80E-07

5E1-WS03 - 14/08/2023					
Time (min)	Break (mins)	Depth (m)	Change	Speed	
Initial		0.98			
1		1.035			
2	1	1.024	-0.011	-0.000183333	
3	1	1.01	-0.014	-0.000233333	
4	1	1.005	-0.005	-8.33333E-05	
5	1	1	-0.005	-8.33333E-05	
6	1	0.998	-0.002	-3.33333E-05	
7	1	0.995	-0.003	-0.00005	
8	1	0.995	0	0	
9	1	0.994	-0.001	-1.66667E-05	
10	0	0.994	-	-	Test Period
40	30	0.994	0	0	
70	60	0.994	0	0	
240	230	0.992	-0.002	-1.45E-07	

Initial Water (m bgl)	0.994
Duration (min)	230
Final Water (m bgl)	0.992
Measured Change (m)	-0.002
Speed (m/sec)	-1.45E-07

5E1-WS05 14/08/2023					
Time (mins)	Break	Depth (m)	Change	Speed	
Initial		1.974			
1		1.989			
2	1	1.976	-0.013	-0.000216667	
3	1	1.974	-0.002	-3.33333E-05	
4	1	1.974	0	0	
5	1	1.973	-0.001	-1.66667E-05	
6	1	1.973	0	0	
7	1	1.973	0	0	
8	1	1.973	0	0	
9	1	1.973	0	0	
10	0	1.973	-	-	
40	30	1.972	-0.001	-5.56E-07	Test Period
70	60	1.971	-0.002	-5.56E-07	

Initial Water (m bgl)	1.973
Duration (min)	60
Final Water (m bgl)	1.971
Measured Change (m)	-0.002
Speed (m/sec)	-5.56E-07

5E1-WS06 16/08/2023					
Time (mins)	Break	Depth (m)	Change	Speed	
Initial		2.402			
1		2.461			
2	1	2.435	-0.026	-0.000433333	
3	1	2.423	-0.012	-0.0002	
4	1	2.416	-0.007	-0.000116667	
5	1	2.413	-0.003	-5E-05	
6	1	2.412	-0.001	-1.66667E-05	
7	1	2.409	-0.003	-5E-05	
8	1	2.406	-0.003	-5E-05	
9	1	2.406	0	0	
10	0	2.406	-	-	
28	18	2.403	-0.003	-2.78E-06	Test Period
46	36	2.402	-0.004	-1.85E-06	
85	75	2.402	-0.004	-8.89E-07	

Initial Water (m bgl)	2.406
Duration (min)	75
Final Water (m bgl)	2.402
Measured Change (m)	0.00
Speed (m/sec)	-8.89E-07

5E1-WS07 16/08/2023					
Time (mins)	Break	Depth (m)	Change	Speed	
Initial		2.202			
1		2.214			
2	1	2.211	-0.003	-5E-05	
3	1	2.205	-0.006	-1E-04	
4	1	2.21	0.005	8.33333E-05	
5	1	2.205	-0.005	-8.33333E-05	
6	1	2.2	-0.005	-8.33333E-05	
7	1	2.2	0	0	
8	1	2.196	-0.004	-6.66667E-05	
9	1	2.196	0	0	
10	0	2.196	-	-	
48	38	2.194	-0.002	-8.77E-07	Test Period
65	55	2.192	-0.004	-1.21E-06	
98	88	2.19	-0.006	-1.14E-06	
163	153	2.188	-0.008	-8.71E-07	

Initial Water (m bgl)	2.196
Duration (min)	153
Final Water (m bgl)	2.188
Measured Change (m)	-0.01
Speed (m/sec)	-8.71E-07

5E1-WS08 16/08/2023					
Time (mins)	Break	Depth (m)	Change	Speed	
Initial		2.001			
1		2.274			
2	1	2.214	-0.06	-0.001	
3	1	2.172	-0.042	-0.0007	
4	1	2.133	-0.039	-0.00065	
5	1	2.104	-0.029	-0.000483333	
6	1	2.082	-0.022	-0.000366667	
7	1	2.066	-0.016	-0.000266667	
8	1	2.053	-0.013	-0.000216667	
9	1	2.043	-0.01	-0.000166667	
10	0	2.035	0	0.00E+00	
57	47	2.015	-0.02	-7.09E-06	Test Period
93	83	2.0011	-0.0339	-6.81E-06	
109	99	2.0011	-0.0339	-5.71E-06	
360	350	2.007	-0.028	-1.33E-06	
520	510	2.006	-0.029	-9.48E-07	

Initial Water (m bgl)	2.035
Duration (min)	510
Final Water (m bgl)	2.006
Measured Change (m)	-0.03
Speed (m/sec)	-9.48E-07