Technical Note

Project:	P18-669 Llanwern – Phase 5E2		
Subject:	Phase 5E2 Controlled Waters Detailed Quantitative Risk Assessment Addendum		
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1 Introduction

1.1 General

Rodgers Leask Ltd (RLL) has been commissioned by Brighton STM Developments Limited (BSTMDL) to develop a phase specific addendum Controlled Waters Detailed Quantitative Risk Assessment (CWDQRA) to assess the potential risk to Controlled Waters for Phase 5E2 of the Glan Llyn development at Llanwern, Newport (herein referred to as the Site).

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

1.2 Purpose

This report has been prepared to support the discharge of Planning Condition 27 of the Outline Planning Permission Reference 06/0471 for the proposed development of residential development Phase 5E2 as part of a wider mixed-use development at Llanwern, Newport.

Planning Condition 27 states the following.

"(27) Prior to the commencement of each phase of development as defined by Condition 03 (or at such other date or stage in development or for such specified activities or works as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination relating to that phase or activity shall each be submitted to and approved, in writing, by the Local Planning Authority:

(1) A preliminary risk assessment which has identified:

(a) all previous uses;
(b) potential contaminants associated with those uses;
(c) a conceptual model of the site indicating sources, pathways and receptors;
(d) potentially unacceptable risks arising from contamination at the site.

(2) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.

(3) The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

(4) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer term monitoring of pollutant linkages, maintenance and arrangements for contingency action. Any changes to these components require the express consent of the Local Planning Authority.

Reason: To ensure that the proposed development will not cause pollution of the environment or harm to human health."

1.3 Objectives and Scope

The objectives and scope of this report are to assess the soil chemical testing results obtained during previous ground investigations, within the Site, against the soil re-use criteria presented in H F Consulting's Soils Validation Strategy and to discuss the suitability of the soils for retention as part of the proposed remedial works.

1.4 Sources of Information

The following documents have been reviewed in preparation of this technical note, and should be read in conjunction with it:

- RLL, Updated Controlled Waters Detailed Quantitative Risk Assessment, Glan Llyn, ref. 18669-RLE-19-RP-O-0006, dated June 2022.
- H F Consulting, Glan Llyn: Soils validation strategy for protection of controlled waters (30937 R2), dated December 2024.RLL,
- RLL, Phase 5E2 Desk Study and Ground Investigation Report, ref. 18669-RLL-24-XX-RP-O-0627, dated August 2026.

2 Site Information

2.1 Site Setting

The Site is located within the Glan Llyn development at the former Llanwern Steelworks, approximately 5.8km to the east of Newport City Centre, at approximate National Grid Reference 336520E, 186397N. The wider Glan Llyn development covers approximately 250 hectares and is proposed to be redeveloped for residential, commercial and open space use.

The Site is irregular in shape, covers an area of approximately 7.0ha and is located near the centre of the wider Glan Llyn development. The Site boundary is shown on RLL Drawing 18669-RLL-22-XX-RP-O-0298, and the site illustrative masterplan is presented on Drawing ref. 8111-08-A012 Rev P09, both presented in **Appendix A**.

2.2 Site History

The Site historically housed various infrastructure associated with the former Llanwern Steelworks including the travelling boom, orientated in a west-east orientation along the northern Site boundary. It further housed the drive house on its eastern side, as well as numerous pipelines and the Holts domestic water tower. The central part of the Site harboured the lime kilns, screen house, hoppers, conveyors and lime bunkers, all orientated east-west. The radioactive store occupied the southern side of the Site and the air products hydrogen plant was located on the southeast corner of the Site. Drain 4 crossed the western side of the Site in an approximate north-south orientation. The Site was partially demolished by 2004 and fully demolished by 2021.

2.3 Geology

Information pertaining to the underlying ground conditions at the Site has been obtained via the BGS Onshore Geoindex[1]. The published geological information shows the Site to be void of Made Ground. However, due to the Site's history, Made Ground is likely to be present associated with the previous development and subsequent demolition.

Superficial deposits are shown to comprise Tidal Flat Deposits.

Tidal Flat Deposits are described by the BGS as *'unconsolidated sediment, mainly mud and/ or sand. They may form the top surface of a deltaic deposit. Normally a consolidated soft silty clay, with layers of sand, gravel and peat.'*

The underlying bedrock is shown to be the Mercia Mudstone Group.

[1] http://mapapps2.bgs.ac.uk/geoindex/home.html

The Mercia Mudstone Group is described by the BGS as comprising '*predominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite bearing units in some basinal areas. Thin beds of gypsum/anhydrite are widespread; sandstones are also present*'.

There is an inferred fault approximately 600m northeast of the Site which trends roughly north to south and extends northwards away from Site.

2.4 Encountered Ground Conditions

Three previous ground investigations have been undertaken across the wider Glan Llyn development Site:

- Atkins (2014) excavated five trial pits;
- Atkins (2016) drilled one cable percussion boreholes; and
- RLL (2020/21) excavated eighty-five trial pits.

Detailed information is available in the RLL Phase 5E2 Desk Study and Ground Investigation Report (ref. 18669-RLL-24-XX-RP-O-0627-P01).

The following table provides a summary of the exploratory holes that were situated within the Site boundary.

Summary of Historical Exploratory Holes within the Site Boundary	
Report	**Exploratory Holes**
Atkins (2014)	Five Trial Pits.
Atkins (2016)	Two Cable Percussion Boreholes and two Window Sample Boreholes.
RLL (2020/21)	Eighty-five Trial Pits.

RLL Drawing 18669-RLL-23-XX-DR-O-0580-P02 presented in **Appendix A** shows the location of the exploratory holes.

The ground investigations found the Site to be underlain by Made Ground to a maximum depth of 3.00m bgl overlying Tidal Flat Deposits, underlain by bedrock of the Mercia Mudstone Group.

The general Made Ground comprised the following types:

- Occasionally silty sandy gravelly CLAY;
- Soft to firm gravelly CLAY;
- Occasionally clayey occasionally sandy occasionally cobbly GRAVEL;
- Occasionally clayey gravelly SAND;

- Occasionally sandy GRAVEL of slag;
- Loose GRAVEL;
- White CLAY (Lime);
- Silty GRAVEL;
- Very sandy clayey GRAVEL.

Gravel and cobble components comprised fine to coarse, angular to subrounded red brick, concrete, clinker, coal, limestone, slag, mudstone, quartz, shale, flint and ash; in addition to fragments of plastic, metal fragments, rebar, pig iron, wood and rootlets.

Tidal Flat Deposits were described as fibrous PEAT; soft to firm occasionally silty CLAY; or occasionally clayey SILT with occasional rootlets.

The Mercia Mudstone Group was encountered in one location and described as very stiff reddish brown silty CLAY (Grade IVb).

2.5 Post-construction ground conditions

The following table provides an anticipated post-construction ground model.

Post-Development Ground Conditions		
Unit	**Approximate Depth (Depth mbgl)**	**Description**
Impermeable Construction Materials/ Housing Sub-base/Permeable Topsoil	0.6	Imported clean topsoil/ construction materials
Piling Mat*	0.5	Imported recycled 6F2 (*may be included within 600mm of construction materials)
Made Ground	1.5 – 2.0	re-engineered Made Ground
Tidal Flat Deposits	7.0 – 10.0	No change from current conditions
Bedrock (Mercia Mudstone Group)	>1,350	No change from current conditions

In accordance with the assumptions of the 2019 RLL CWDQRA, further mitigation to promote lateral flow is recommended, this will be in the form of a drainage blanket installation to cap the re-engineered Made Ground (including piling mat) which will increase the levels fall from the centre of a plot to periphery.

2.6 Historical Groundwater Monitoring and Wider Site Hydrogeology

A summary of pre-reclamation groundwater levels is presented in the Phase 5E2 Desk Study & Phase 2 Geo-Environmental Report. Groundwater levels recorded during the pre-reclamation ground investigations across the development suggest that the groundwater is present beneath the wider Glan Llyn development as follows:

- Shallow/ perched water within the Made Ground (shallow boreholes); and
- Groundwater within the Tidal Flat Deposits (confined to the very soft fibrous peat) and Mercia Mudstone (deep boreholes).

The shallow perched water described above was recorded during pre-reclamation conditions. The earthworks for this phase include the re-engineering of the Made Ground, this shallow perched water shall no longer be present due to the engineering and compaction of Made Ground reducing the permeability.

Groundwater monitoring within the deep boreholes was in the solid geology, and hydraulic continuity between the upper perched shallow water and 'regional' groundwater was considered likely to be limited, due to low permeability strata (natural clay). Post-development, the excavation and re-compaction of the Made Ground was recognised as likely to reduce its permeability, lowering still further, the hydraulic continuity.

3 Controlled Waters Detailed Quantitative Risk Assessment

3.1 Introduction

In 2019 RLL was commissioned by St Modwen Developments to prepare a Controlled Waters Detailed Quantitative Risk Assessment (CWDQRA) for the wider Glan Llyn development, report reference 18669-RLE-19-RP-O-0006, dated June 2022. This assessment was considered to be an update to and further development of Atkins Limited (Atkins), CWDQRA, Document Reference: 5111373-LLA-OUT-0257, Version: 3, dated February 2017.

The principal objective of the 2019 RLL CWDQRA, was to provide compliant future surface water flow contributions from private drainage system on the wider Glan Llyn development (following the redevelopment for mixed residential and commercial end use) on entry into the Monks' Ditch. An important consideration in developing the CWDQRA was to improve sustainability and further limit the amount of material which requires off-site removal by improving soil chemical conditions to a degree that it would be suitable for reuse on site.

With the aim of generating a streamlined and consistent process for the Phase-by-Phase reporting process, in 2024 H Fraser Consulting Ltd. were commissioned to build on the findings of the CWDQRA and produce a Soils Validation Strategy for the Protection of Controlled Waters (30937 R2).

A summary of the reporting relating to controlled waters on the development are presented in the following sections.

The area of the development this assessment covers is known as Phase 5E2, the Site area, is presented on RLL Drawing reference 18669-RLL-22-XX-RP-O-0298 in **Appendix A**.

3.2 RLL CWDQRA Summary

In 2019 RLL prepared a Controlled Waters Detailed Quantitative Risk Assessment (CWDQRA) for the wider Glan Llyn development site. This assessment incorporated a comprehensive dataset of concentrations of contamination recorded in soils across the development, included data taken from the 2018 investigations within the Site. Screening analysis of soil, soil leachate, groundwater and surface water data revealed potential moderate to low levels of inorganic and organic contamination present across the wider site in line with contaminants associated with former steelworks sites.

The Made Ground generally comprises clayey sandy gravels with local slag, burnt shale, asphalt, concrete, brick and mudstone, and was identified to be a source of

contamination. Calculation of representative re-use criteria for a residential with plant uptake end use was undertaken using a dilution assessment methodology based on the site-wide water balance, incorporating site specific permeability and infiltration parameters. No allowance was made for dilution of discharged waters within Monks Ditch itself as part of this calculation as, this being the receptor, it is proposed that the water quality in this Controlled Water be maintained (as far as possible) at EQS values.

Comparison of re-use criteria against available soil chemical testing established that a significant volume of the Made Ground was likely to be suitable for re-use onsite, however, localised source materials existed containing higher concentrations of contamination (particularly elevated concentrations of iron, manganese and vanadium), and ammoniacal and cyanide components, may require remediation, or offsite disposal.

Further modelling of these contaminants was undertaken using Remedial Target Methodology (RTM) to assess the potential extent of attenuation of these specific determinands within the ground where these soils may be placed, with the receiving surface waters being assumed to be existing Blueways (reens), which were considered as the Compliance Points. The compliance point for the Residential Development has been assigned to the point of discharge into the receptor Monks' Ditch and will require an enacted permit for discharge to occur.

Initial modelling was carried out by Atkins (Glan Llyn, Llanwern Controlled Waters Detailed Quantitative Risk Assessment dated February 2017), with this approach being adopted within later revisions of this Report in the Rodgers Leask, Controlled Waters Detailed Quantitative Risk Assessment, Glan Llyn (sitewide) Update (2019), using the Equation presented in the EA Table 5.2 – soil-water partitioning of the EA Remedial Targets Methodology Guidance (2006) where a pore-water concentration (Cp) was determined from soil concentration analyses to derive soil reuse criteria at the site as a whole. Subsequently, and purely to gauge the potential distance that re-engineered Made Ground could be placed from the respective Compliance Point(s), further modelling was carried out for specific determinands using the EA RT Excel Worksheets, based on maximum and average soils concentrations determined within samples of re-engineered Made Ground and available site derived data.

Further modelling was carried out for specific determinands (including specific PAHs) using the EA Remedial Target Excel Worksheets, based on maximum and average soils concentrations did indicate that there was little attenuation of the initial porewater PAH concentrations on migration within the re-engineered Made Ground toward the nearest reen Receptors. However, the presence of elevated porewater PAH concentrations was only theoretical and based on calculated values derived using the Equation presented in the EA Table 5.2 – soil-water partitioning of the EA Remedial Targets Methodology Guidance (2006). Actual PAH concentrations determined more recently in groundwater samples recovered (where sufficient groundwater was available for sampling purposes), were generally lower, and potentially significantly lower, than the calculated values which were derived using soils analyses data. Additionally, as previously mentioned, there was

little evidence obtained of hydraulicly continuous groundwater horizon(s) within the re-engineered Made Ground beneath areas proposed for residential and commercial development. Therefore, there has been no proven PAH (or other contaminant) migration pathways towards the reens.

As the data used within the CWDQRA has utilised ground investigation data taken from within the Site, it is therefore considered that the findings of this assessment are representative of the Site and therefore adoption of the calculated re-use criteria and recommendations presented within the CWQRA are appropriate.

3.3 HFCL Glan Llyn: Soils Validation Strategy for Protection of Controlled Waters

Following queries from Natural Resources Wales (NRW), H Fraser Consulting Limited (HFCL) were commissioned by RLL to assist with NRW liaison and reporting pursuant to the discharge of PC28. Following discussion with NRW, RLL and the developer, HFCL prepared a revised methodology for the validation of soils in relation to the protection of controlled waters.

The assessment does not rely on groundwater analysis, being dependent rather on soil re-use values. It included distance specific remedial targets that model the attenuation of contaminants in the saturated zone allowing for advection, dispersion, retardation and decay during transport. In addition to the inclusion of distance specific remedial targets, further statistical and spatial analysis was carried out on contaminants of concern.

More detail is provided in the HFC Glan Llyn: Soils Validation Strategy for the Protection of Controlled Waters (30937 R2).

4 Comparison of Phase 5E2 and CWDQRA Dataset

The dataset utilised in the RLL CWDQRA was taken from soil samples from the wider Glan Llyn development site which included the Site area. A comparison of the residential CWDQRA dataset with the soil samples taken from within the Site has been undertaken.

The purpose of this comparison is to establish if the residential dataset used in the CWDQRA is representative of concentrations of contamination present within Site and therefore whether the derived re-use criteria and recommendations of this assessment are applicable to the Site or whether further assessment is required.

4.1 Phase 5E2 Sampling

148 soil samples were collected during the RLL 2020/21 ground investigation contamination testing taken from the Made Ground. The works comprised trial pitting to collect soil samples for chemical analyses.

The samples were analysed for heavy metals, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbon (TPH), gasoline range organics (GROs), BTEX, pH, soil organic matter (SOM), cyanide, phenols, ammoniacal nitrogen and select samples were also tested for asbestos.

4.2 Comparison of Results

The chemical soil results for the Made Ground analysed from Phase 5E2 have been compared to the sitewide dataset presented in the RLL CWDQRA, as shown in the following table. The table compares the maximum, average and 95th percentile concentrations for each determinand within Phase 5E2 against the sitewide dataset.

The Phase 5E2 data has been considered comparable with the sitewide dataset where the maximum, average and 95th percentile concentrations are less than or equal to the sitewide dataset. In limited cases where the Phase 5E2 dataset concentrations are greater than the sitewide dataset, these exceedances have been reviewed in the context of overall distribution to determine whether the dataset is broadly consistent with the sitewide dataset.

Determinand	Samples from Phase 5E2 – Residential Area			Samples from CWDQRA - Residential Area			Considered Representative of CWDQRA data (Yes/No)
	Maximum Soil Sample Value* (mg/kg)	Average Soil Sample Value* (mg/kg)	95th Percentile Soil Sample Value* (mg/kg)	Maximum Soil Sample Value (mg/kg)	Average Soil Sample Value* (mg/kg)	95th Percentile Soil Sample Value* (mg/kg)	
Inorganic Metals and Metalloids							
Arsenic	280.00	13.78	35.65	397.00	12.18	21.89	Y
Cadmium	5.40	0.57	1.67	31.30	0.65	2.37	Y
Chromium	700.00	62.04	226.50	3090.00	138.89	590.80	Y
Copper	200.00	24.70	65.25	1790.00	25.19	52.07	Y
Iron	321000.00	34268.71	136800.00	2390000.00	103039.00	277000.00	Y
Lead	1400.00	75.80	176.50	4220.00	91.58	231.85	Y
Manganese	209000.00	7136.35	18235.00	408000	9574	33520	Y
Mercury	8.70	0.31	1.40	6.24	0.68	1.40	Y
Nickel	270.00	19.45	43.65	313.00	25.73	44.90	Y
Selenium	22.70	2.16	10.00	51.70	6.09	16.67	Y
Vanadium	660.00	71.00	196.50	2880.00	206.93	693.10	Y
Zinc	5700.00	195.41	376.50	13300.00	291.45	784.75	Y
Other Inorganics							
Ammoniacal Nitrogen	127.00	8.20	37.90	1590.00	60.97	263.00	Y
Cyanide	68.00	2.82	11.65	272.00	2.32	4.05	N
Organics							
Benzene	0.18	0.02	0.18	0.12	0.04	0.04	N
Toluene	0.14	0.01	0.14	0.07	0.01	0.02	N
Ethylbenzene	0.08	0.01	0.08	0.02	0.01	0.01	N
Xylene	0.20	0.02	0.20	0.11	0.01	0.01	N
Phenol	0.88	0.02	0.02	1.21	0.02	0.03	Y
TPH Criteria Working Group							
Aliphatics >C5-C6	1.00	0.85	1.00	0.92	0.03	0.04	N
Aliphatics >C6-C8	9.90	0.91	1.00	3.32	0.04	0.09	N
Aliphatics >C8-C10	330.00	3.63	1.00	74.20	0.20	0.12	N
Aliphatics >C10-C12	400.00	14.07	11.23	987.00	2.55	0.35	N
Aliphatics >C12-C16	4900.00	56.61	40.45	514.00	5.26	16.47	N
Aliphatics >C16-C21	5200.00	65.23	99.00	3530.00	26.92	83.07	Y
Aliphatics >C21-C35	6800.00	153.58	642.50	2980.00	64.53	174.70	N
Aliphatics >C35-C44	630.00	7.03	4.01	913.00	20.37	68.99	Y
Aromatics >EC5-EC7	1.00	0.85	1.00	5.26	0.03	0.04	Y
Aromatics >EC7-EC8	1.00	0.85	1.00	20.30	0.05	0.04	Y
Aromatics >EC8-EC10	240.00	2.66	1.00	49.50	0.14	0.10	N
Aromatics >EC10-EC12	710.00	6.93	1.00	658.00	1.71	0.24	N
Aromatics >EC12-EC16	3200.00	29.78	1.00	5280.00	13.62	24.72	Y
Aromatics >EC16-EC21	3100.00	29.30	9.99	9800.00	56.85	165.55	Y
Aromatics >EC21-EC35	4400.00	76.22	159.00	9010.00	122.76	440.85	Y
Aromatics >EC35-EC44	2000.00	15.24	2.67	1580.00	40.69	150.00	Y
Polyaromatic Hydrocarbons							
Acenaphthylene	7.80	0.25	0.65	2100.00	3.08	3.18	Y
Acenaphthene	25.00	0.27	0.18	193.00	0.47	0.41	Y
Anthracene	21.00	0.48	1.50	1860.00	3.61	5.48	Y
Benz(a)anthracene	20.00	1.21	5.30	1150.00	4.64	1.61	Y
Benzo(a)pyrene	26.00	1.54	7.82	714.00	3.73	10.58	Y
Benzo(b)fluoranthene	33.00	2.03	9.13	1110.00	5.28	15.87	Y

Determinand	Samples from Phase 5E2 – Residential Area			Samples from CWDQRA - Residential Area			Considered Representative of CWDQRA data (Yes/No)
	Maximum Soil Sample Value* (mg/kg)	Average Soil Sample Value* (mg/kg)	95th Percentile Soil Sample Value* (mg/kg)	Maximum Soil Sample Value (mg/kg)	Average Soil Sample Value* (mg/kg)	95th Percentile Soil Sample Value* (mg/kg)	
Benzo(k)fluoranthene	11.00	0.71	3.58	373.00	2.08	5.96	Y
Benzo(g,h,i)perylene	22.00	1.08	5.59	333.00	2.51	7.27	Y
Chrysene	21.00	1.29	6.37	1090.00	4.22	11.47	Y
Dibenzo(a,h)anthracene	3.90	0.26	1.07	177.00	0.74	1.86	Y
Indeno(1,2,3-cd)pyrene	23.00	1.19	6.12	374.00	2.61	7.46	Y
Fluoranthene	68.00	2.37	8.72	2940.00	11.59	29.56	Y
Fluorene	13.00	0.21	0.39	1890.00	2.81	2.72	Y
Naphthalene	5.00	0.28	1.27	4680.00	10.98	5.66	Y
Phenanthrene	110.00	1.68	3.07	3810.00	9.79	18.03	Y
Pyrene	51.00	1.98	8.60	1.95	0.01	0.03	N

A review of the datasets has shown that the contaminants largely show similar or lower concentration ranges for the Site and for the wider Glan Llyn development site utilised within the CWDQRA. The results are therefore considered to be representative of the levels of contamination present within the Site and therefore adoption of the calculated re-use criteria and recommendations presented within the CWDQRA are appropriate for the Site.

Cyanide, benzene, toluene, ethylbenzene and xylene are shown to have higher 95th percentile concentrations within the Site when compared to the wider development DQRA dataset, but the average and maximum are comparable. The sample pool for the Site includes 148 samples whereas the CWDQRA included 1382 samples, this leads to higher concentrations falling into the 95th percentile calculations and therefore the values for Phase 5E2 appear elevated when compared to the CWDQRA values. However, this is not considered indicative of generally higher contaminant concentrations across the phase and instead a result of a smaller sample pool. When the maximum and average concentrations are compared, the Phase 5E2 dataset remains broadly consistent with the concentrations reported in the site-wide dataset.

Contaminants aliphatics >C5-C6, aliphatics >C6-C8, aliphatics >C8-C10, aliphatics >C10-C12, aliphatics >C12-C16, aliphatics >C21-C35, aromatics >EC8-EC10, aromatics >EC10-EC12 are shown to have higher maximum, average and 95th percentile concentrations when compared to the sitewide DQRA dataset. Substantially elevated aliphatic and aromatics were recorded from two samples from grid square AX32 at 1.3m and 2.3m bgl, this grid square should be treated as a hotspot and be managed in accordance with the Remediation Strategy. The high concentrations recorded within this grid square have substantially skewed the comparison in the above table and if excluded, average, maximum um and 95th percentile concentrations would be comparable to the DQCWRA dataset.

Pyrene concentrations from samples within the Site had higher maximum, average and 95th percentile concentrations when compared to the wider site CWDQRA dataset. However, the detection limits within the sample pool on the Site have concentrations that are greater than the respective concentrations presented within the wider CWDQRA and this causes a significant skew in the results. The true concentrations for these contaminants are likely to be significantly lower than their respective values. It should be noted that all pyrene concentrations fall below the RLL CWDQRA re-use criteria for 40% Infiltration Rainfall screening criteria.

In addition to the information provided above and given the very low solubility of pyrene in water[2] as well as the distance of the Site from existing and future surface waters, then it is considered that this shouldn't have a detrimental impact on the conclusions of the CWDQRA.

4.3 Comparison to RLL CWDQRA re-use criteria for 40% Infiltration Rainfall

The samples collected from the Made Ground on the Site, as part of the RLL ground investigation, have subsequently been assessed against the RLL CWDQRA Reuse Criteria for 40% Infiltration Rainfall values for a residential end use as outlined in the RLL CWDQRA . A summary of exceedances is presented in the table below, and the chemical screening results are presented in full in **Appendix B**.

Summary of Exceedances of RLL CWDQRA Reuse Criteria for 40% Infiltration Rainfall for Residential End Use			
Contaminant	**No. of Exceedances**	**Screening Value (mg/kg)**	**Concentration Range (mg/kg)**
Cyanide (Total)	32	2.31	0.50 – 68.00
Aromatic TPH >C8-C10	1	164.594	0.01 – 240.00
Aromatic TPH >C10-C12	1	259.933	1.00 – 710.00
Aromatic TPH >C12-C16	2	517.061	1.00 – 3200.00
Aromatic TPH >C16-C21	1	1631.673	1.00 – 3100.00
Phenanthrene	1	31.077	0.03 – 110.00
Fluoranthene	9	7.614	0.03 – 68.00
Benzo[b]fluoranthene	22	3.91	0.02 – 33.00
Benzo[k]fluoranthene	5	5.79	0.01 – 11.00
Benzo[g,h,i]perylene	2	15.229	0.02 – 22.00

The results show that total cyanide, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, phenanthrene, fluoranthene, benzo[b]fluoranthene, benzo[k]fluoranthene and benzo[g,h,i]perylene exceeded the RLL CWDQRA Reuse Criteria for 40% Infiltration Rainfall for Residential End Use. The location

[2] Government of Canada, Fact Sheet: Pyrene, Version 1.2.7.1, URL: https://gost.tpsgc-pwgsc.gc.ca/Contfs.aspx?ID=44&lang=eng, Accessed 13/08/2026.

of exceedances within the Made Ground are shown on RLL Drawing 18669-RLL-26-XX-DR-O-0940-P01, **Appendix A**.

The re-use criteria in the above assessment were presented within the RLL CWDQRA, however following review by H F Consulting, slight calculation adjustments were made, and they were updated and re-produced within their Soils Validation Strategy for the Protection of Controlled Waters.

Following this assessment, recorded exceedances shall be managed, via the earthworks operation, in accordance with the HFC Glan Llyn: Soils Validation Strategy for the Protection of Controlled Waters.

Soil chemical testing certificates are presented within the RLL Phase 5E2 Desk Study and Ground Investigation Report (Ref: 18669-RLL-24-XX-RP-O-0627-P01).

5 Assessment and Conclusions

In 2021 RLL submitted a CWDQRA for the wider Glan Llyn development site. This assessment incorporated a comprehensive dataset of concentrations of contamination recorded in soils across the development. Further assessment has been undertaken comparing soil concentrations recorded within the Site area with those of the wider residential Glan Llyn development site used in the CWDQRA.

This assessment has concluded that the dataset used in the CWDQRA is largely representative of the levels of contamination present within the Site and therefore adoption of the calculated re-use criteria and recommendations presented within the CWDQRA are appropriate for the Site.

Following an assessment of soil chemical testing data from within the Site, exceedances of the reuse criteria for total cyanide, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, phenanthrene, fluoranthene, benzo[b]fluoranthene, benzo[k]fluoranthene and benzo[g,h,i]perylene have been identified that may represent a risk to Controlled Waters.

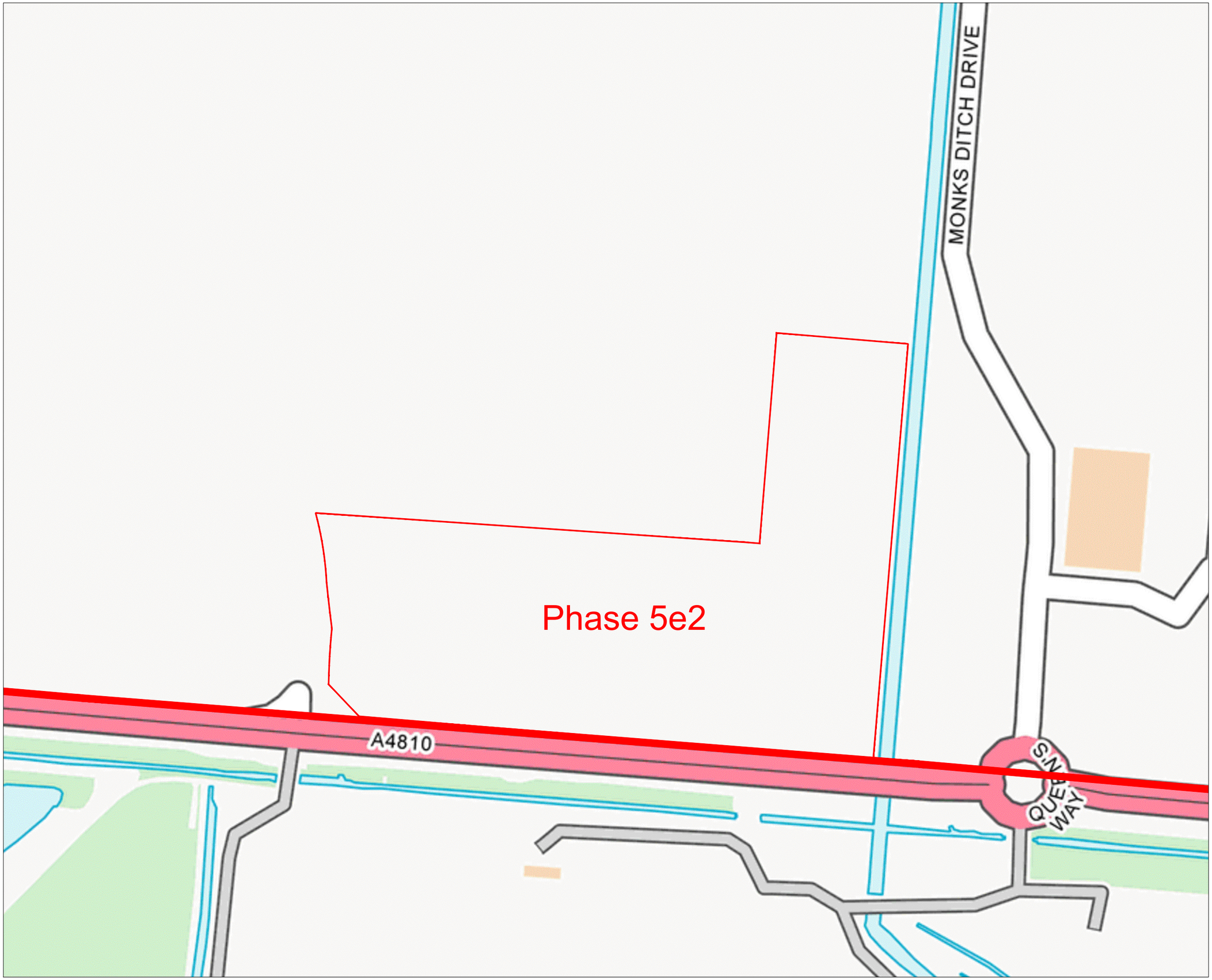
The soil reuse criteria have been conservatively calculated considering only dilution of contamination by intercepted surface water from the finished development. In reality subsurface degradation and attenuation will occur as these contaminants migrate laterally though the ground, further reducing concentrations prior to dilution within the on-site private drainage system.

6 Recommendations

It is recommended that further delineation and assessment of the identified exceedances of total cyanide, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, phenanthrene, fluoranthene, benzo[b]fluoranthene, benzo[k]fluoranthene and benzo[g,h,i]perylene (as shown on RLL Drawing 18669-RLL-26-XX-DR-O-0940-P01) are undertaken as part of the remediation works, with unsuitable material being removed as necessary, in order to ensure that they do not present a risk to controlled waters.

A Remediation Strategy has been prepared for Phase 5E2 (18669-RLL-26-XX-RP-O-0640-P01) outlining required remedial measures for the Site.

Appendix A: Drawings



GENERAL NOTES

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ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.

ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

KEY:

Approximate Site Boundary

Rev	Date	Amendments	By	Chk

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5e2

Site Location Plan

INFORMATION

	Drawn	Checked	Date
1:1250 @ A1	SR	CW	10.08.22

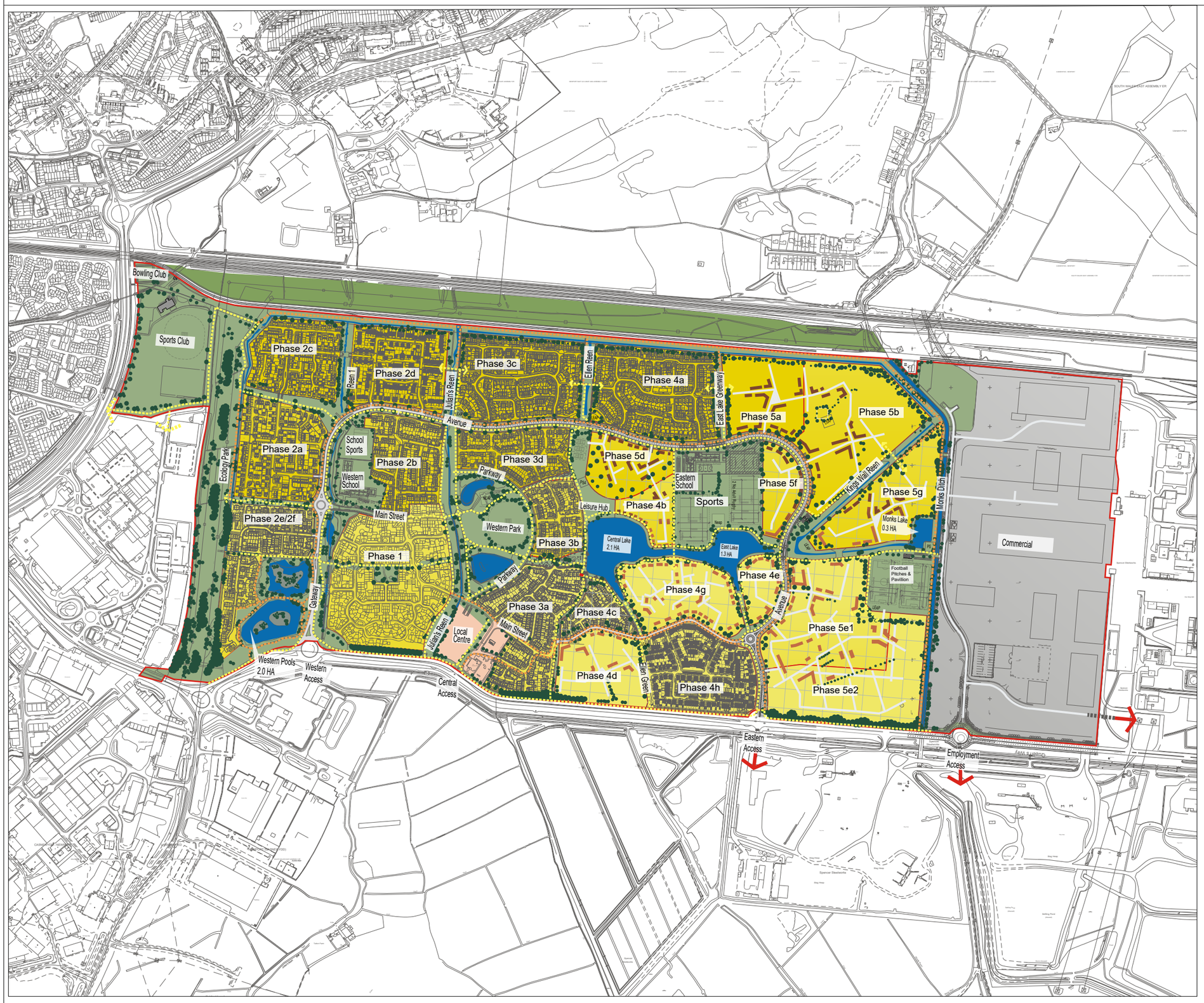
Drawing No. Rev.

18669-RLL-22-XX-RP-O-0298

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Glan Llyn -ESAMP Indicative Masterplan



SGP
Architects + Masterplanners

Waterfront House,
2a Smith Way, Grove Park,
Enderby, Leicester,
LE19 1SX
t: +44 (0)116 247 0557
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		

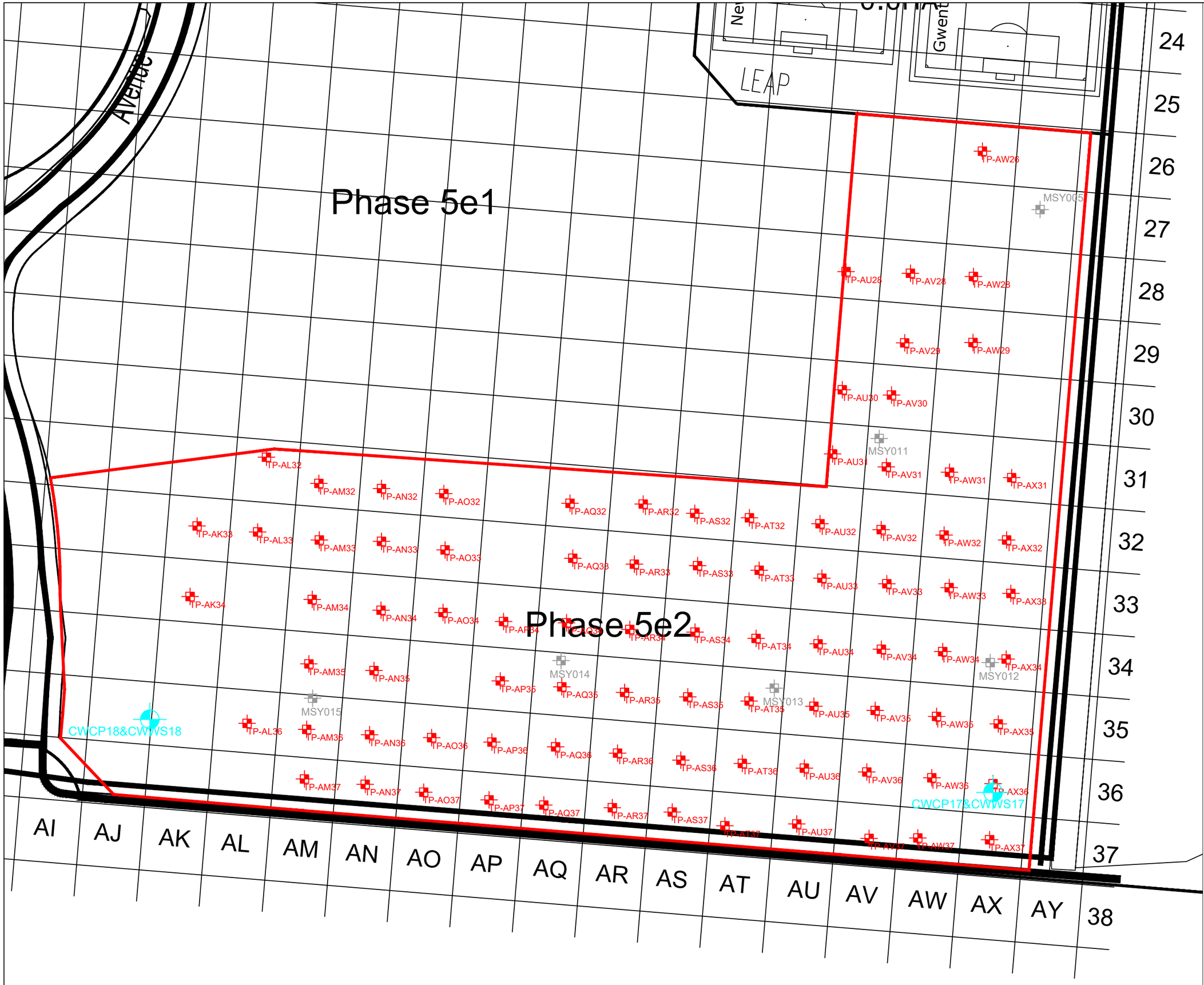
Notes:
Residential areas quoted are approximate gross site areas and include Leaps, Laps and on plot road infrastructure

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

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

ST.MODWEN

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KEY:

- ATKINS (2014) TRIAL PIT LOCATIONS
- ATKINS (2016) EXPLORATORY HOLE LOCATIONS
- RLE (2020/21) TRIAL PIT LOCATIONS

Rev	Date	Amendments	By	Chk
P02	26/05/2026	Added Trial Pit Locations	AMS	CW
P01	13/03/2024	First Issue	ET	FT

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E2 Exploratory Hole Location Plan

INFORMATION

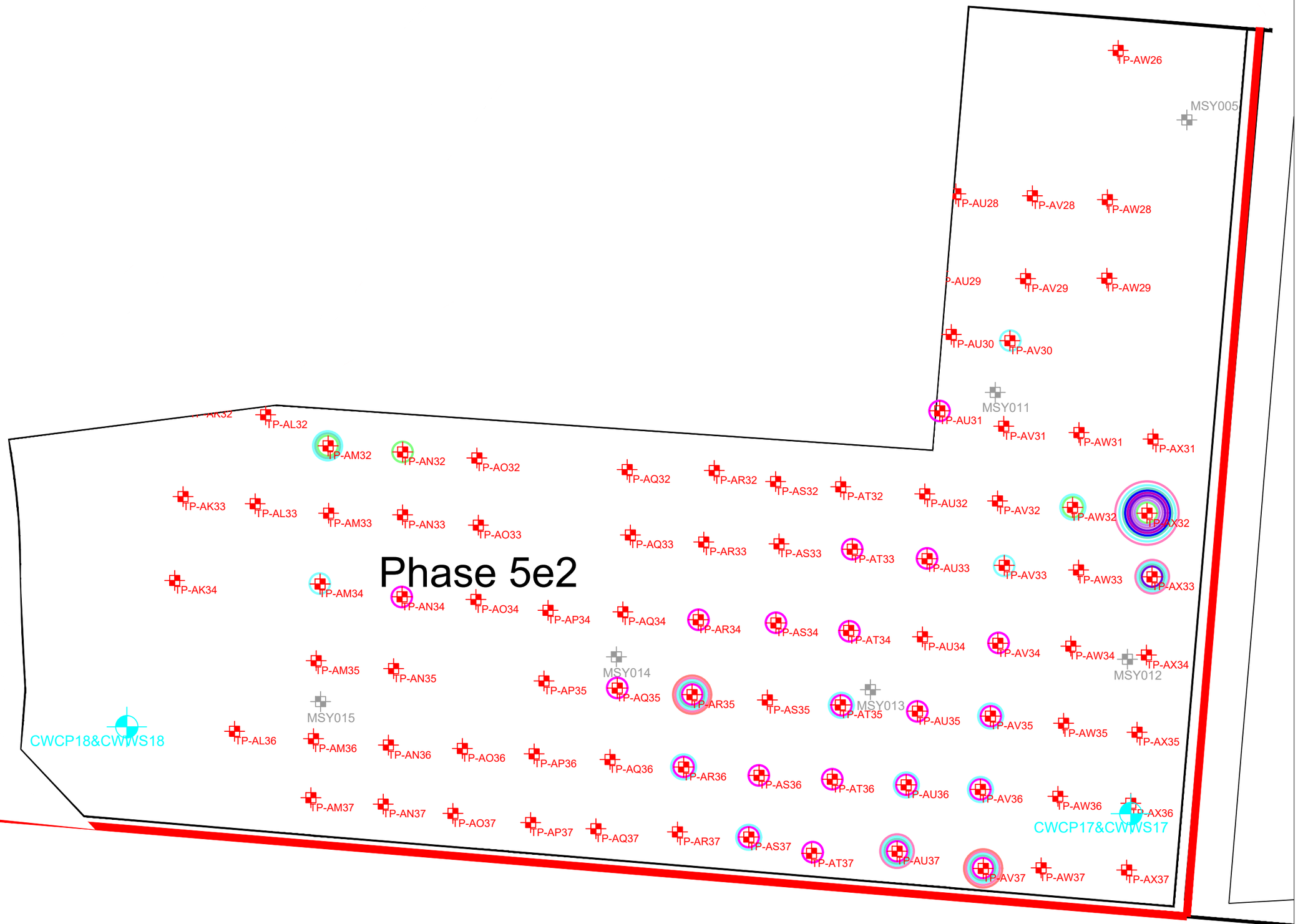
	Drawn	Checked	Date
NTS	ET	FT	13/03/24

Drawing No. — Rev.

18669-RLL-23-XX-DR-O-0580 P02

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ANY DISCREPANCIES NOTED ON SITE ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.

KEY:

- SITE BOUNDARY
- SITE PHASE OUTLINES
- RLL TRIAL PIT
- ATKINS CONTROLLED WATERS GI BOREHOLE
- ATKINS MSY TRIAL PITS

EXCEEDANCE LOCATIONS:

- CYANIDE
- MANGANESE
- AROMATIC >C8-C10
- AROMATIC >C10-C12
- AROMATIC >C12-C16
- AROMATIC >C16-C21
- PHENANTHRENE
- FLUORANTHENE
- BENZO[B]FLUORANTHENE
- BENZO[K]FLUORANTHENE
- BENZO[G,H,I]PERYLENE

Rev	Date	Amendments	By	Chk
P01	04/09/2024	FIRST DRAFT	AMS	CW

Client
St Modwen Developments

Project
P18-669 Llanwern Reclamation

Drawing Title
Phase 5E2
Exceedance Location Plan

INFORMATION

	Drawn	Checked	Date
NTS	AMS	CW	04/09/24

Drawing No. 18669-RLL-24-XX-DR-O-0636 Rev. P01

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Appendix B: Chemical Screening

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Job No.:		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750
					Sample ID.:		1440202	1440203	1440204	1440205	1440206	1440207	1440208	1440209	1440210	1440211	1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651	1441657	1441658	1441659	1441660	1441661	1441662	1441663
					Client Sample Ref.:	CWDQRA Reuse	AW34-1	AW34-2	AW34-1	AW34-2	AV35-1	AV35-2	AV36-1	AV36-2	AV37-1	AV37-2	AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2	AR35-2	AR35-1	AQ37-2	AR34-2	AR34-1	AQ35-1	AQ37-1
					Sample Type:	Criteria for 40%	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):	Infiltration																										
					Bottom Depth (m):	Rainfall	1.00	2.00	0.40	1.80	1.00	2.00	0.30	1.30	0.50	1.60	1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00	1.30	0.60	1.50	2.00	0.50	0.50	0.80
					Date Sampled:	(Residential)	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	30-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	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:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		COVENTRY		COVENTRY		COVENTRY		COVENTRY		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		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	%	0.020			13	10	6.3	13	8.8	9.6	12	7.2	11	6.8	13	24	1.4	14	22	5.8	18	6.2	19	9.2	7.1	8.7	13	8.0	12	13
Soil Colour	N	2040		N/A			Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Beige	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Black	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	Gravel	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	M	2010		4.0			9.8	10.8	10.5	10.1	10.7	10.6	10.0	10.3	10.9	11.0	9.9	9.4	> 12.0	9.6	10.2	10.5	11.5	11.3	10.5	10.6	9.4	9.2	11.1	11.6	11.0	10.8
Cyanide (Total)	M	2300	mg/kg	0.5	2.313		< 0.50	0.5	1.5	4.0	5.2	3.1	8.0	< 0.50	10.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	14	4.4	1.3	2	4	3.7	< 0.50	3	11.0	7	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	176.983		1.5	0.8	1.1	2.3	0.8	0.6	0.6	4.4	1.0	< 0.50	7	16	0.9	68	2	1	2.2	1.3	2	3	1.6	16	2	0.9	1	6.8
Iron (Total)	N	2430	mg/kg	100	349148.01		5400.0	5500.0	7800.0	6200.0	4900.0	8700.0	9000.0	6100.0	7800.0	12000.0	21000	19000	4300.0	17000	26000	26000	24000.0	24000.0	23000	22000	23000.0	19000	15000	22000.0	20000	15000.0
Arsenic	M	2450	mg/kg	1	2902.688		2.6	1.9	3.1	2.0	1.9	2.0	2.1	1.3	2.3	1.2	12	29	3.1	12	18	13	6.0	7.9	19	15	7.1	12	24	7.0	10	9.3
Cadmium	M	2450	mg/kg	0.1	83.661		0.3	0.1	0.1	0.3	0.4	0.2	0.4	0.3	< 0.10	0.3	0	0	0.3	0	5	1	0.8	0.6	1	0	0.6	0	1	0.8	1	0.4
Chromium	M	2450	mg/kg	1	10806.907		15.0	13.0	23.0	13.0	12.0	22.0	22.0	12.0	35.0	55.0	26	15	15.0	13	60	36	68.0	82.0	150	41	54.0	46	34	100.0	49	22.0
Manganese	M	2450	mg/kg	5	38175.69		2100	2200	3000	1900	2000	3300	2800	3000	2600	3900	1300	270	430	480	2900	19000	4900	4200	5700	2100	3200	2500	2700	4100	1900	1100
Copper	M	2450	mg/kg	0.5	516.883		12.0	7.1	7.7	9.9	6.4	6.1	11.0	6.0	5.4	5.3	30	50	10.0	16	110	16	17.0	20.0	83	35	23.0	47	20	25.0	43	23.0
Mercury	M	2450	mg/kg	0.1	150.809		< 0.05	< 0.05	< 0.05	0.1	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0	0	< 0.05	0	2	0	0.1	0.3	0	0	0.3	0	0	0.8	1	0.2
Nickel	M	2450	mg/kg	0.5	13188.601		5.8	3.3	4.7	5.6	3.6	3.6	5.9	3.7	3.9	3.7	18	28	5.2	20	44	24	16.0	17.0	33	20	18.0	25	10	16.0	21	15.0
Lead	M	2450	mg/kg	0.5	18032.071		45.0	16.0	24.0	40.0	33.0	29.0	38.0	34.0	12.0	25.0	97	44	17.0	31	970	41	82.0	63.0	160	120	150.0	52	59	140.0	180	77.0
Selenium	M	2450	mg/kg	0.2	804.305		0.7	1.3	1.5	0.7	0.5	0.3	0.6	0.3	0.8	0.3	2	3	0.5	1	2	2	0.6	1.0	2	1	1.2	1	3	0.9	1	1.3
Vanadium	U	2450	mg/kg	5	1840.198		26.0	20.0	36.0	23.0	17.0	27.0	26.0	15.0	35.0	55.0	45	26	12.0	21	49	78	88.0	81.0	110	46	46.0	88	42	83.0	50	25.0
Zinc	M	2450	mg/kg	0.5	157599.516		90.0	41.0	54.0	180.0	76.0	110.0	130.0	140.0	25.0	46.0	160	73	39.0	33	5700	170	220.0	140.0	240	220	280.0	97	150	290.0	320	110.0
Organic Matter	M	2625	%	0.4			15	3.3	3.3	7.9	5.0	5.3	11	6.6	4.7	2.1	12	22	13	6.2	14	3.8	9.7	4.7	28	15	13	9.1	2.4	6.6	10	8.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	83.664		< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	411.626		< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	3254.98		< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	25838.23		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.3	< 1.0	< 1.0	19.0	< 1.0	< 1.0	< 1.0	< 1.0	5	< 1.0	< 1.0	< 1.0	< 1.0	4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	515488.601		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14.0	< 1.0	< 1.0	18.0	< 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	5.7
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	64895263.78		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16.0	< 1.0	< 1.0	64.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 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	64895263.78		< 1.0	< 1.0	< 1.0	< 1.0	72.0	< 1.0	140.0	< 1.0	< 1.0	140.0	< 1.0	< 1.0	< 1.0	< 1.0	80	< 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	64895263.78		< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5			< 5.0	< 5.0	< 5.0	< 5.0	72	< 5.0	170	< 5.0	< 5.0	240	< 5.0	< 5.0	< 5.0	< 5.0	110	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7
Aromatic TPH >C5-C7	N	2680	mg/kg	1	9.752		< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	1	202.89		< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	164.594		< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	1	259.933		< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	1	517.061		< 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	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1	1631.673		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.7	< 1.0	< 1.0	11.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1	12949.875		< 1.0	< 1.0	< 1.0	< 1.0	57.0	< 1.0	84.0	< 1.0	< 1.0	120.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12	120.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	12949.875		< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5			< 5.0	< 5.0	< 5.0	< 5.0	57	< 5.0	86	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	12	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10			< 10	< 10	< 10	< 10	130	< 10	260	< 10	< 10	370	< 10	< 10	< 10	< 10	110	< 10	< 10	< 10	< 10	16	130	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1	4358		< 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
Toluene	M	2760	µg/kg	1	147182		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	< 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
Ethylbenzene	M	2760	µg/kg	1	92030		< 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
m & p-Xylene	M	2760	µg/kg	1	84970		< 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
o-Xylene	M	2760	µg/kg	1	84970		< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.1	31.45		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.4	0.6	< 0.10	0.6	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	0.4	1	1	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	19.168		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.6	< 0.10	2.7	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	0.4	0	2	4.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	34.073		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.2	< 0.10	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	31.077		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.2	< 0.10	0.4	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	0.2	< 0.10	0	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	31.077		0.6	0.6	< 0.10	0.7	1.4	1.1	0.9	1.2	0.2	2.9	1	0	< 0.10	0	1	1	1.0	2.3	1	4	2.6	1	< 0.10	1.0	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	39.119		0.1	0.1	< 0.10	0.4	0.5	1.5	0.4	0.6	< 0.10	4.3	0	< 0.10	< 0.10	< 0.10	1	0	0.6	0.6	0	2	1.6	0	< 0.10	0.2	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	7.614		0.9	0.6	< 0.10	0.7	3.5	6.8	2.9	3.5	0.2	23.0	1	0	< 0.10	1	3	2	4.1	5.7	1	14	15.0	1	< 0.10	1.0	0	0.5
Pyrene	M	2800	mg/kg	0.1	87.557		0.8	0.6	< 0.10	0.7	2.9	6.7	2.4	3.3	0.2	24.0	0	0	< 0.10	0	4	2	4.3	4.3	1	11	14.0	1	< 0.10	0.9	0	0.5
Benzo[a]anthracene	M	2800	mg/kg	0.1	695.38		0.4	0.3	< 0.10	0.6	2.0	4.7	1.8	2.9	0.1	15.0	0	< 0.10	< 0.10	0	3	1	3.1	2.4	0	7	11.0	1	< 0.10	0.6	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	711.578		0.3	0.4	< 0.10	0.5	1.8	6.4	2.0	3.9	0.2	21.0	0	< 0.10	< 0.10	0	3	1	4.8	2.6	0	7	11.0	1	< 0.10	0.5	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	3.91		0.7	0.3	< 0.10	0.5	3.3	9.2	2.3	5.8	0.2	33.0	1	< 0.10	< 0.10	0	7	2	7.3	3.1	1	14	28.0	< 0.10	< 0.10	0.8	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	5.79		0.3	0.2	< 0.10	0.2	1.2	2.8	0.8	1.8	0.1	11.0	0	< 0.10	< 0.10	< 0.10	2	1	2.4	1.1	0	4	9.2	< 0.10	< 0.10	0.3	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	39.489		0.3	0.4	< 0.10	0.5	2.5	7.1	1.9	4.5	0.2	26.0	1	< 0.10	< 0.10	0	5	1	5.7	2.1	0	11	22.0	< 0.10	< 0.10	0.7	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	29.018		< 0.10	< 0.10	< 0.10	0.5	2.4	6.5	1.4	4.2	< 0.10	23.0	0	< 0.10	< 0.10	< 0.10	4	1	5.4	1.7	0	10	22.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	959.886		< 0.10	< 0.10	< 0.10	0.3	0.5	1.0	0.4	0.7	< 0.10	3.9	0	< 0.10	< 0.10	< 0.10	1	0	0.9	0.4	0	2	3.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	15.229		< 0.10	< 0.10	< 0.10	0.6	2.1	5.8	1.4	4.0	< 0.10	22.0	0	< 0.10	< 0.10	< 0.10	5	1	5.0	1.6	0	9	18.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2			4.5	3.4	< 2.0	6.0	24	60	19	38	< 2.0	210	5.0	< 2.0	< 2.0	2.1	42	12	45	29	6.4	98	160	3.5	< 2.0	5.9	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	3.497		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	1.1	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1			< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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				Job No.:	22-20750	22-20750	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20772	22-20772	22-20772	22-20772	22-20772	22-20772	22-20755	22-20755	22-20755
				Sample ID.:	1441664	1441665	1441669	1441670	1441671	1441672	1441673	1441674	1441675	1441676	1441700	1441701	1441702	1441703	1441704	1441705	1441706	1441707	1441789	1441790	1441791	1441792	1441793	1441794	1441683	1441684	1441685
				Client Sample Ref.:	AT37-1	AQ35-2	AT35-1	AT35-2	AU34-2	AU34-1	AT34-2	AS36-1	AU36-1	AU35-1	AQ36-2	AQ34-1	AO37-1	AO37-2	AN36-2	AN36-1	AQ34-2	AQ36-1	AT36-2	AU37-1	AT37-2	AT36-1	AU37-2	AN35-2	AP37-1	AP35-2	AP35-1
				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):																											
				Bottom Depth (m):	0.80	2.00	0.5	1.4	2.3	0.5	1.5	1	0.7	0.5	2	0.5	0.3	1.8	2	0.5	1.5	0.5	1.8	0.6	1.8	0.4	1.7	1	0.20	1.20	0.50
				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	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	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	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM	COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A																			Chrysotile (Fibres/ Clumps)								
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		Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		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	8.6	21	10	13	14	6.5	9.5	7.6	6.4	15	17	1.7	2.8	7.8	9.1	5.0	7.7	4.8	12	9.8	13	6.6	11	13	3.2	32	11
Soil Colour	N	2040		N/A	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Grey	Brown	Grey	Black	Black	Black	Brown	Brown	Black	Brown	Black	Grey
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 and Roots	Stones	Stones	Stones	None	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	9.2	> 12.0	> 12.0	10.2	10.3	11.2	11.7	11.8	> 12.0	8.9	11.4	9.7	10.9	9.0	10.7	> 12.0	11.4	> 12.0	11.2	11.3	12.0	> 12.0	11.2	9.7	8.6	11.3
Cyanide (Total)	M	2300	mg/kg	0.5	5.9	9	14	5.4	1	1.5	2.7	1.8	18.0	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	0.6	2.5	0.7	8.7	3.3	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	0.8	40	1	0.7	12	2.2	0.8	0.6	1.1	2	15	0.9	1.0	3.3	18	1.1	1	< 0.50	0.9	1.7	1.6	1.5	1.3	2	2.3	2	5.2
Iron (Total)	N	2430	mg/kg	100	21000.0	22000	23000	22000.0	19000	20000.0	12000.0	24000.0	25000.0	22000	19000	8100.0	14000.0	13000.0	25000	12000.0	13000	14000.0	11000.0	22000.0	14000.0	22000.0	13000.0	21000	19000.0	16000	13000.0
Arsenic	M	2450	mg/kg	1	3.9	17	12	8.8	17	8.0	6.9	6.0	5.2	12	18	2.4	5.3	5.7	19	5.3	26	4.2	6.2	6.5	5.4	6.8	8.1	12	6.4	34	8.3
Cadmium	M	2450	mg/kg	0.1	0.7	0	1	0.8	0	0.4	0.2	0.1	0.3	0	0	0.2	0.3	0.1	0	0.2	2	0.5	0.2	0.7	0.2	0.5	0.3	0	0.6	1	0.6
Chromium	M	2450	mg/kg	1	230.0	19	270	110.0	15	39.0	34.0	540.0	89.0	29	15	6.1	12.0	27.0	13	23.0	17	66.0	28.0	110.0	19.0	230.0	40.0	48	22.0	19	34.0
Manganese	M	2450	mg/kg	5	9200	620	9900	5000	480	2400	2500	14000	4900	2100	350	250	3900	1400	990	910	2400	3000	2100	5500	660	9500	1100	2000	1600	430	1600
Copper	M	2450	mg/kg	0.5	51.0	37	46	37.0	27	13.0	16.0	13.0	14.0	22	42	4.8	6.9	15.0	33	5.4	13	11.0	18.0	21.0	17.0	23.0	29.0	32	14.0	62	47.0
Mercury	M	2450	mg/kg	0.1	0.2	0	0	0.2	0	0.1	0.1	< 0.05	0.2	0	0	0.1	0.1	< 0.05	0	< 0.05	0	0.1	0.1	0.1	< 0.05	0.1	0.1	0	0.1	0	0.1
Nickel	M	2450	mg/kg	0.5	16.0	36	29	38.0	18	13.0	16.0	10.0	11.0	22	19	3.2	7.8	14.0	37	7.7	10	33.0	11.0	16.0	16.0	13.0	24.0	21	12.0	31	15.0
Lead	M	2450	mg/kg	0.5	61.0	30	170	80.0	35	41.0	22.0	12.0	32.0	34	80	29.0	26.0	24.0	27	17.0	62	50.0	27.0	60.0	14.0	60.0	29.0	51	51.0	58	77.0
Selenium	M	2450	mg/kg	0.2	0.5	2	1	0.5	1	0.7	2.7	< 0.25	0.4	1	1	< 0.25	< 0.25	1.4	1	< 0.25	0	0.3	2.6	1.0	0.8	0.5	0.8	1	0.4	3	0.8
Vanadium	U	2450	mg/kg	5	330.0	34	170	76.0	21	41.0	36.0	320.0	87.0	33	22	6.8	12.0	52.0	25	24.0	24	58.0	43.0	100.0	27.0	200.0	37.0	46	27.0	40	66.0
Zinc	M	2450	mg/kg	0.5	290.0	62	560	210.0	59	110.0	48.0	40.0	130.0	120	70	61.0	42.0	42.0	61	33.0	140	85.0	75.0	150.0	30.0	190.0	45.0	79	140.0	130	270.0
Organic Matter	M	2625	%	0.4	8.3	14	8.3	7.8	17	6.0	3.3	6.0	2.9	5.2	31	4.7	1.0	2.4	5.5	6.0	7.4	10	5.9	7.8	9.3	2.1	2.6	12	8.3	31	9.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.8	< 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	12	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	32.0	< 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	30	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	84.0	< 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	200	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3000.0	< 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	830	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	630.0	< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3800	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1100	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	500.0	< 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	180	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	33.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	530	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	180	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	4300	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	1300	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	22	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	6.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	6.8	< 1.0	6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.0	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.9	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.3	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	0.9	< 0.10	3	1.2	< 0.10	0.8	0.4	< 0.10	0.5	0	1	0.1	0.2	0.5	< 0.10	0.3	1	0.5	< 0.10	1.7	< 0.10	< 0.10	0.6	< 0.10	0.3	0	0.6
Anthracene	M	2800	mg/kg	0.1	0.4	< 0.10	1	0.4	< 0.10	0.2	0.2	< 0.10	0.6	0	0	< 0.10	< 0.10	0.1	< 0.10	< 0.10	0	< 0.10	< 0.10	1.5	< 0.10	< 0.10	0.9	< 0.10	0.2	< 0.10	0.1
Fluoranthene	M	2800	mg/kg	0.1	2.0	< 0.10	7	3.2	1	1.3	0.7	0.6	1.9	1	2	0.1	0.3	0.5	< 0.10	0.4	1	0.7	< 0.10	9.1	< 0.10	1.0	4.4	1	0.7	0	0.9
Pyrene	M	2800	mg/kg	0.1	1.9	< 0.10	7	3.2	1	0.9	0.6	0.6	2.3	1	1	0.1	0.2	0.3	< 0.10	0.3	1	0.6	< 0.10	9.3	< 0.10	1.1	3.5	1	0.7	0	0.8
Benzo[a]anthracene	M	2800	mg/kg	0.1	1.5	< 0.10	4	2.1	1	0.9	< 0.10	< 0.10	1.8	0	1	< 0.10	0.1	0.2	< 0.10	0.1	0	0.3	< 0.10	7.6	< 0.10	1.0	3.0	< 0.10	0.5	< 0.10	0.4
Chrysene	M	2800	mg/kg	0.1	1.3	< 0.10	4	2.0	1	0.6	< 0.10	< 0.10	2.0	1	1	< 0.10	0.2	0.2	< 0.10	0.2	0	0.4	< 0.10	9.6	< 0.10	1.0	4.4	< 0.10	0.6	< 0.10	0.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	1.8	< 0.10	8	3.6	< 0.10	1.1	< 0.10	< 0.10	4.4	1	1	< 0.10	< 0.10	0.3	< 0.10	0.2	1	0.6	< 0.10	17.0	< 0.10	1.8	5.7	< 0.10	1.1	< 0.10	0.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.6	< 0.10	3	1.3	< 0.10	0.4	< 0.10	< 0.10	1.5	0	0	< 0.10	< 0.10	0.1	< 0.10	0.1	0	0.2	< 0.10	5.9	< 0.10	0.5	1.8	< 0.10	0.4	< 0.10	0.1
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.3	< 0.10	6	2.5	< 0.10	1.1	< 0.10	< 0.10	3.6	1	1	< 0.10	< 0.10	0.2	< 0.10	0.1	0	0.4	< 0.10	14.0	< 0.10	1.5	4.0	< 0.10	0.7	< 0.10	0.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	5	2.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.4	< 0.10	12.0	< 0.10	< 0.10	< 0.10	< 0.10	0.8	< 0.10	0.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	1	0.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.1	< 0.10	1.4	< 0.10	< 0.10	< 0.10	< 0.10	0.2	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	< 0.10	< 0.10	4	2.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.4	< 0.10	12.0	< 0.10	< 0.10	< 0.10	< 0.10	0.7	< 0.10	0.3
Total Of 16 PAH's	N	2800	mg/kg	2	13	< 2.0	56	24	2.2	7.3	< 2.0	< 2.0	19	6.5	8.6	< 2.0	< 2.0	2.6	< 2.0	< 2.0	4.0	4.4	< 2.0	100	< 2.0	7.9	28	< 2.0	7.0	< 2.0	4.7
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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				Job No.:	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373
				Sample ID.:	1441686	1441687	1441688	1441689	1441690	1441691	1441718	1441719	1441720	1441721	1441722	1441723	1444570	1444571	1444572	1444573	1444574	1444575	1444576	1444577	1444540	1444541	1444542	1444543	1444544	1444545	1444546
				Client Sample Ref.:	AP37-2	AP36-2	AP36-1	AS36-2	AU36-2	AU35-2	AT34-1	AO36-1	AN35-1	AP34-1	AO36-2	AP34-5	AX33-1	AX33-2	AW33-1	AW33-2	AV33-1	AV33-2	AV33-3	AV33-4	AU33-1	AT33-1	AT33-2	AS33-1	AS33-2	AR33-1	AR33-2
				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):							0.70	0.50	0.30	0.60	1.80	1.90	0.80	1.60	0.90	1.80	0.60	3.00	2.20	0.10	0.90	1.20	2.00	1.20	2.00	0.90	1.60
				Bottom Depth (m):	1.80	1.50	0.70	1.80	1.30	1.50																					
				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	31-May-2022	31-May-2022	31-May-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	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:		COVENTRY		COVENTRY		COVENTRY	COVENTRY		COVENTRY		COVENTRY	COVENTRY	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM			DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A											Chrysotile (bitumen)																
Asbestos Identification	U	2192		N/A		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		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											0.063																
Total Asbestos	U	2192	%	0.001											0.063																
Moisture	N	2030	%	0.020	11	27	6.9	9.1	15	14	8.9	7.3	11	7.7	8.4	12	12	10	12	8.1	5.2	7.5	8.7	5.4	6.5	7.4	11	13	13	5.9	31
Soil Colour	N	2040		N/A	Brown	Black	Brown	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	White
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 and Roots	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	Chalk
pH	M	2010		4.0	10.9	8.3	9.0	> 12.0	11.6	12.0	10.8	> 12.0	11.6	11.4	10.2	10.5	9.6	9.8	9.1	9.5	9.3	10.3	9.7	8.9	11.0	10.5	10.8	12.0	9.7	9.7	12.0
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	4.5	14	45.0	1.6	< 0.50	< 0.50	0.7	< 0.50	< 0.50	1.9	0.7	< 0.50	< 0.50	< 0.50	< 0.50	2	2	5	2.6	4	1.8	2	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	0.7	7	12.0	1.4	2	1.2	0.9	1	0.9	2.6	2	1.3	40.0	4.4	2	1	10.0	0.9	1	3	1	4.7	1	71.0	1	0.9	1.7
Iron (Total)	N	2430	mg/kg	100	14000.0	15000	17000.0	15000.0	21000	20000.0	8700.0	10000	18000.0	9600.0	21000	11000.0	18000.0	16000.0	26000	17000	28000.0	15000.0	30000	24000	25000	18000.0	19000	19000.0	21000	27000.0	2100.0
Arsenic	M	2450	mg/kg	1	8.9	28	8.1	4.4	12	5.7	3.8	14	7.3	5.7	12	5.6	3.6	4.0	36	12	6.8	5.4	13	130	72	4.0	14	5.5	22	2.6	1.8
Cadmium	M	2450	mg/kg	0.1	0.2	1	0.8	0.6	0	0.6	< 0.10	0	0.4	0.1	0	< 0.10	0.5	1.7	0	0	0.3	0.3	0	1	1	0.4	0	0.1	0	0.2	< 0.10
Chromium	M	2450	mg/kg	1	23.0	17	22.0	55.0	57	74.0	24.0	8	76.0	25.0	17	27.0	28.0	38.0	46	16	14.0	33.0	21	47	66	11.0	11	22.0	12	220.0	19.0
Manganese	M	2450	mg/kg	5	2200	400	1300	2900	3700	3500	2000	330	2800	2100	660	3500	1300	1100	7400	4200	2000	3100	2500	22000	17000	2000	1300	2600	510	1600	240
Copper	M	2450	mg/kg	0.5	38.0	48	21.0	27.0	29	21.0	10.0	7	17.0	12.0	18	16.0	7.5	7.8	21	11	7.8	19.0	10	62	30	7.0	27	8.9	38	6.7	2.7
Mercury	M	2450	mg/kg	0.1	0.1	0	0.1	0.1	0	1.4	< 0.05	< 0.05	0.1	< 0.05	0	< 0.05	0.1	< 0.05	0	< 0.05	< 0.05	0.1	0	0	0	< 0.05	0	< 0.05	1	< 0.05	< 0.05
Nickel	M	2450	mg/kg	0.5	12.0	29	14.0	10.0	23	12.0	7.9	5	12.0	5.2	14	4.7	9.3	12.0	42	14	8.4	10.0	14	60	32	7.0	16	6.8	23	31.0	3.6
Lead	M	2450	mg/kg	0.5	190.0	47	99.0	51.0	56	33.0	19.0	19	27.0	20.0	25	16.0	61.0	98.0	25	15	75.0	33.0	36	40	25	26.0	50	20.0	41	16.0	7.1
Selenium	M	2450	mg/kg	0.2	3.4	3	0.9	0.5	1	0.7	1.4	< 0.25	1.7	3.6	1	3.7	1.0	1.0	1	1	0.6	1.4	1	1	2	2.2	2	2.3	5	0.3	0.3
Vanadium	U	2450	mg/kg	5	46.0	36	26.0	61.0	55	64.0	38.0	10	67.0	49.0	21	74.0	18.0	23.0	35	28	20.0	33.0	45	90	79	29.0	26	48.0	22	54.0	7.9
Zinc	M	2450	mg/kg	0.5	87.0	70	180.0	170.0	150	290.0	26.0	30	39.0	42.0	43	33.0	97.0	77.0	130	40	130.0	63.0	75	120	85	41.0	41	42.0	76	29.0	9.4
Organic Matter	M	2625	%	0.4	8.8	22	9.0	8.8	7.4	4.7	4.8	12	12	2.9	13	3.5	10	2.1	31	9.5	19	6.0	19	12	13	4.8	15	5.0	24	0.72	3.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	55.0	< 1.0	30	< 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	< 1.0	< 1.0	< 1.0	< 1.0	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	< 1.0	560.0	< 1.0	300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	45.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	85	< 1.0	670.0	< 1.0	370	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	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	24.0	< 1.0	250	< 1.0	1800.0	120.0	1200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	730.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	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	< 1.0	< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	24	< 5.0	340	< 5.0	3100	120	1900	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	910	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	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	< 1.0	71.0	< 1.0	41	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.3	< 1.0	< 1.0	< 1.0	91.0	< 1.0	33	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	190.0	< 1.0	780	< 1.0	120.0	< 1.0	73	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	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	< 1.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	200	< 5.0	780	< 5.0	280	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	20	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	< 10	< 10	< 10	< 10	51	< 10	< 10	< 10	< 10	< 10	< 10	< 10	230	< 10	1100	< 10	3400	120	2000	< 10	< 10	< 10	< 10	< 10	< 10	930	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	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	< 1.0	4	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	2	< 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	2	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	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	< 1.0	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.2	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	0.6	0	1.5	0.3	0	0.4	0.2	2	0.6	0.2	1	0.3	1.6	0.3	2	0	0.2	< 0.10	1	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	0.2	0	0.8	< 0.10	< 0.10	0.2	< 0.10	1	0.1	< 0.10	0	< 0.10	2.1	0.1	1	< 0.10	0.2	< 0.10	0	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.9	0	4.6	0.8	0	1.1	0.4	4	0.8	0.3	1	0.4	12.0	0.5	3	0	1.0	0.2	1	5	0	< 0.10	0	0.3	< 0.10	0.2	< 0.10
Pyrene	M	2800	mg/kg	0.1	0.7	0	3.9	0.7	1	1.2	0.4	3	0.7	0.3	1	0.3	11.0	0.6	2	0	0.8	0.2	1	4	0	< 0.10	0	0.2	< 0.10	0.2	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.3	< 0.10	2.3	0.5	0	1.1	0.2	2	0.4	0.1	0	0.2	8.1	0.4	1	0	< 0.10	< 0.10	0	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	0.4	< 0.10	2.1	0.5	0	1.4	0.3	2	0.5	0.1	0	0.2	8.8	0.4	2	0	< 0.10	< 0.10	0	2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.5	< 0.10	3.1	0.7	1	2.1	0.5	2	0.7	< 0.10	0	0.2	18.0	0.8	3	< 0.10	< 0.10	< 0.10	0	4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.2	< 0.10	1.2	0.3	0	0.7	0.2	1	0.2	< 0.10	0	0.1	6.5	0.2	1	< 0.10	< 0.10	< 0.10	0	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.4	< 0.10	2.7	0.4	0	1.4	0.2	2	0.5	< 0.10	0	0.2	15.0	0.5	1	< 0.10	< 0.10	< 0.10	0	3	< 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	0.1	0.4	< 0.10	1.9	0.4	1	1.3	0.2	1	0.3	< 0.10	0	< 0.10	16.0	0.7	1	< 0.10	< 0.10	< 0.10	0	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	0.2	0.2	0.34	0.5	0.1	0	0.1	< 0.10	0	< 0.10	2.2	0.1	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.2	< 0.10	1.6	0.4	0.27	1.2	0.3	1	0.4	< 0.10	0	< 0.10	13.0	0.6	1	< 0.10	< 0.10	< 0.10	0	2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	4.7	< 2.0	26	5.1	4.2	13	3.0	20	5.3	< 2.0	4.6	< 2.0	110	5.2	21	< 2.0	2.3	< 2.0	4.4	36	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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					Job No.:	22-21373	22-21373	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-25621	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-29945	22-29945	22-29945	22-29945	22-31543	22-31543	22-31543
					Sample ID.:	1444547	1444548	1459497	1459498	1459499	1459500	1459501	1459502	1459503	1459504	1459505	1459506	1459507	1463371	1468354	1468355	1468356	1468357	1468358	1468359	1482829	1482830	1482831	1482833	1490065	1490066	1490069
					Client Sample Ref.:	AQ33-1	AQ33-2	AX32-1	AX32-2	AX32-3	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2	AX31-1	AX31-2	AW31-1	AV31-1	AV32-1	AW32-1	AO33-1	AO32-1	AO32-2	AR32-1	AS32-1	AT32-1	AV30-1	AQ32-1	AQ23-2	AU32-1
					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):	0.60	1.70	0.3	1.3	2.3	0.5	1.5	0.3	1.3	0.3	1.0	0.5	1.8	0.2	0.70	1.00	1.00	1.70	2.00	2.90	0.5	1.3	1.3	1.0	0.50	1.00	0.30
					Bottom Depth (m):	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.70	1.00	1.00	1.70	2.00	2.90	-	-	-	-	-	-	-
					Date Sampled:	07-Jun-2022	07-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	29-Jun-2022	29-Jun-2022	29-Jun-2022	05-Jun-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
					Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM	DURHAM	DURHAM			DURHAM	COVENTRY		COVENTRY	COVENTRY	DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																												
ACM Type	U	2192		N/A																			Amosite (Fibres/Clumps)								
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			Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		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	14	16	3.2	12	11	5.8	5.1	9.4	2.6	1.4	10	5.1	8.8	7.2	2.9	4.1	0.82	1.3	26	8.7	7.6	15	11	9.2	0.55	2.3	1.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Black	Brown	Black	Brown	Brown	Grey	Grey	Brown	Black	Black	Black	Brown	Grey	Brown	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Roots and Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Gravel	Gravel	Clay	Clay	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	11.1	11.5	9.2	11.8	8.8	11.0	9.5	11.1	10.3	8.9	10.0	11.4	10.5	10	9.6	10.1	9.0	10.3	8.9	10.0	10.1	9.8	9.1	9.6	7.8	7.8	7.6
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50	1	< 0.50	< 0.50	0.5	0.9	0.9	1.1	1.6	1.7	< 0.50	1.3	0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1	1	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	1.3	13.0	59	< 0.50	< 0.50	1.5	0.9	3.9	0.7	0.9	1.6	0.9	1.2	30.00	< 0.50	< 0.50	2	3.4	11	5.1	1.5	9	27	12	1.0	6.7	34
Iron (Total)	N	2430	mg/kg	100	23000.0	17000.0	22000	18000.0	17000	29000.0	28000.0	30000.0	11000.0	32000.0	28000.0	28000.0	30000.0	22000.00	110000.0	83000	91000	31000.0	35000	85000.0	39000.0	42000	88000	92000	80000.0	58000.0	53000
Arsenic	M	2450	mg/kg	1	8.4	5.2	110	3.6	13	8.9	1.8	6.3	1.5	7.3	6.4	5.3	7.9	13.00	8.2	17	280	9.1	19	9.6	7.7	10	11	28	4.3	5.7	24
Cadmium	M	2450	mg/kg	0.1	0.2	0.1	1	0.1	0	0.2	0.2	0.3	0.2	0.4	0.2	0.5	0.7	0.23	0.1	1	2	0.2	0	0.8	< 0.10	0	2	2	< 0.10	< 0.10	5
Chromium	M	2450	mg/kg	1	28.0	30.0	80	11.0	23	120.0	230.0	48.0	10.0	700.0	63.0	18.0	83.0	47.00	28.0	43	57	31.0	24	67.0	26.0	25	32	79	21.0	28.0	190
Manganese	M	2450	mg/kg	5	2300	1200	54000	2200	8600	120000	12000	3300	790	48000	4600	2900	4000	4100	2200	15000	76000	3300	2800	4200	1600	1700	2800	9500	2400	1100	6400
Copper	M	2450	mg/kg	0.5	17.0	11.0	55	8.4	39	22.0	12.0	14.0	2.8	23.0	15.0	11.0	21.0	16.00	13.0	26	200	24.0	23	21.0	21.0	15	29	27	9.4	9.1	130
Mercury	M	2450	mg/kg	0.1	0.1	< 0.05	0	< 0.05	0	0.1	0.1	0.1	< 0.05	0.2	0.1	0.1	0.1	0.05	< 0.05	0	0	0.1	0	0.2	< 0.05	0	0	0	< 0.05	< 0.05	9
Nickel	M	2450	mg/kg	0.5	16.0	9.9	56	7.4	9	36.0	4.5	21.0	5.3	16.0	16.0	9.0	10.0	17.00	11.0	24	270	13.0	20	19.0	11.0	15	22	41	14.0	18.0	41
Lead	M	2450	mg/kg	0.5	25.0	16.0	64	21.0	24	25.0	34.0	34.0	9.4	41.0	28.0	62.0	110.0	31.00	44.0	55	100	24.0	35	150.0	13.0	17	200	120	12.0	28.0	72
Selenium	M	2450	mg/kg	0.2	1.0	1.1	2	1.7	2	0.6	1.9	0.9	0.3	0.5	0.5	1.0	1.9	0.64	1.2	1	1	0.9	1	1.3	1.0	1	2	1	< 0.25	< 0.25	0
Vanadium	U	2450	mg/kg	5	39.0	29.0	100	26.0	47	98.0	220.0	49.0	11.0	660.0	67.0	29.0	190.0	45.00	40.0	80	160	55.0	46	98.0	37.0	43	48	78	58.0	36.0	200
Zinc	M	2450	mg/kg	0.5	51.0	48.0	320	45.0	49	99.0	60.0	90.0	20.0	70.0	66.0	190.0	230.0	90.00	74.0	130	270	55.0	72	330.0	30.0	39	380	390	35.0	100.0	820
Organic Matter	M	2625	%	0.4	24	6.7	3.8	21	11	64	11	11	5.7	1.9	2.6	28	14	50	67	47	41	9.1	34	24	16	17	24	26	5.6	1.8	12
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	330.0	84	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	1300.0	400	< 1.0	12.0	< 1.0	< 1.0	< 1.0	< 1.0	68.0	6.9	< 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
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	97	4900.0	1600	18.0	20.0	< 1.0	< 1.0	< 1.0	< 1.0	430.0	78.0	< 1.0	8.8	< 1.0	< 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	< 1.0	< 1.0	99	5200.0	1600	8.9	17.0	< 1.0	< 1.0	< 1.0	< 1.0	640.0	99.0	< 1.0	19.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	110.0	110.0	480	6800.0	2000	58.0	250.0	< 1.0	150.0	< 1.0	< 1.0	3400.0	270.0	< 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
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	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	< 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	110	110	670	19000	5700	85	300	< 5.0	150	< 5.0	< 5.0	4600	450	< 5.0	28	< 5.0	< 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	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	240.0	30	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	710.0	150	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	3200.0	840	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	110.0	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	3100.0	780	5.6	< 1.0	5.7	< 1.0	< 1.0	< 1.0	75.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1	85.0	87.0	27	2600.0	680	200.0	90.0	71.0	33.0	36.0	41.0	4400.0	76.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	55.0	< 1.0	5.6	6.7	< 1.0	< 1.0	< 1.0	< 1.0	2000.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	85	87	27	9800	2500	210	97	77	33	36	41	6500	76	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	190	200	700	29000	8100	290	400	77	190	36	41	11000	530	< 10	28	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	130	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	1.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	3.5	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	18.0	6	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	27.0	10	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	5.0	< 0.10	2.9	0.4	0.8	< 0.10	< 0.10	0.3	< 0.10	0.6	< 0.10	< 0.10	< 0.10	4	< 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	0.1	< 0.10	< 0.10	< 0.10	7.8	< 0.10	1.4	0.1	0.3	< 0.10	< 0.10	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	< 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	0.1	< 0.10	< 0.10	< 0.10	25.0	< 0.10	0.3	0.2	0.1	< 0.10	< 0.10	0.1	< 0.10	0.2	< 0.10	< 0.10	< 0.10	0	< 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	0.1	< 0.10	< 0.10	< 0.10	13.0	< 0.10	0.9	0.1	0.2	< 0.10	< 0.10	0.2	< 0.10	0.4	< 0.10	< 0.10	< 0.10	1	< 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	0.1	< 0.10	< 0.10	1	110.0	30	8.1	1.1	1.1	< 0.10	0.8	0.9	2.0	1.4	1.20	0.9	1	3	0.8	1	1.5	< 0.10	< 0.10	1	< 0.10	1.8	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	0	21.0	4	2.5	0.2	0.3	< 0.10	0.2	0.3	0.3	0.3	0.24	0.2	0	1	0.2	0	0.4	< 0.10	< 0.10	0	< 0.10	0.7	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.3	0.3	1	68.0	20	20.0	1.6	2.0	< 0.10	1.0	1.5	2.1	1.7	1.60	0.6	1	5	1.0	0	1.8	0.4	< 0.10	1	4	5.6	< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.1	0.2	0.2	1	51.0	14	14.0	1.3	1.6	< 0.10	0.9	1.6	1.7	1.1	1.30	0.6	1	4	0.8	0	1.5	0.4	< 0.10	0	3	3.8	< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	20.0	5	9.3	0.9	1.1	< 0.10	0.6	1.0	0.7	0.5	0.86	0.4	1	3	0.5	< 0.10	0.7	< 0.10	< 0.10	< 0.10	3	2.2	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	18.0	5	9.2	0.9	1.0	< 0.10	0.7	0.9	0.9	0.4	0.96	0.3	1	3	0.4	< 0.10	0.9	< 0.10	< 0.10	< 0.10	2	2.0	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	17.0	5	12.0	1.4	1.8	< 0.10	< 0.10	1.5	1.2	0.7	1.60	0.5	1	4	0.8	< 0.10	1.1	< 0.10	< 0.10	< 0.10	6	3.0	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	6.1	2	4.1	0.4	0.7	< 0.10	< 0.10	0.5	0.4	0.3	0.60	0.2	0	1	0.3	< 0.10	0.5	< 0.10	< 0.10	< 0.10	2	1.0	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	13.0	3	8.2	0.9	1.2	< 0.10	< 0.10	0.9	0.7	0.4	0.98	0.4	0	3	0.5	< 0.10	0.7	< 0.10	< 0.10	< 0.10	4	1.6	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	6.5	2	7.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	2	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	1.5	0	1.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.49	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	6.0	2	6.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	2.10	< 0.10	< 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	< 2.0	< 2.0	2.7	390	92	110	9.4	12	< 2.0	4.1	10	9.9	7.9	9.3	4.0	7.1	38	5.3	< 2.0	9.1	< 2.0	< 2.0	< 2.0	24	22	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	1	< 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	0.02	< 0.020	< 0.020	< 0.020	0.75	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	0.75	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88	< 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				Job No.:	22-32672	22-32672	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	21-41336	22-20454	22-20454	22-20454	22-20454	22-20454	21-41336	21-41336	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
				Sample ID.:	1494904	1494905	1557446	1557447	1557448	1557449	1557450	1557451	1557452	1557453	1557454	1326695	1440201	1440202	1440203	1440197	1440198	1326696	1326697	1440195	1440196	1440189	1440190	1440191	1440192	1440193	1440194
				Client Sample Ref.:	A034-1	AN34-1	AN37-1	AN37-2	AM37-1	AM37-2	AM36-1	AL36-1	AL36-2	AM35-1	AM34-1	AU31-1	AW35-1	AW34-1	AW34-2	AW37-1	AW37-2	AU30-1	AU30-2	AX34-1	AX34-2	AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2
				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):	1.50	1.00	1.00	2.00	0.80	2.00	0.80	0.90	2.00	1.70	0.20	0.4	0.50	1.00	2.00	0.30	1.50	0.5	1.1	0.70	1.30	1.00	2.00	0.60	1.50	0.50	1.20
				Bottom Depth (m):																											
				Date Sampled:	24-Aug-2022	24-Aug-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	19-Nov-2021	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	19-Nov-2021	19-Nov-2021	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			COVENTRY		COVENTRY		COVENTRY		COVENTRY	COVENTRY		DURHAM	DURHAM		DURHAM			COVENTRY	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	
Asbestos by Gravimetry	U	2192	%	0.001																											
Total Asbestos	U	2192	%	0.001																											
Moisture	N	2030	%	0.020	8.1	5.1	17	13	23	3.9	10	6.0	25	30	8.5	9.4	5.8	13	10	5.1	11	13	17	4.2	6.6	8.5	9.7	4	7.4	7.3	9.1
Soil Colour	N	2040		N/A	Grey	Grey	Grey	Brown	Brown	Brown	Brown	Grey	Black	Grey	Brown	Black	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones, Roots and Wood	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	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.1	10.3	12.0	11.8	9.4	9.4	8.6	9.4	8.3	8.5	10.8	10.4	10.8	9.8	10.8	11.6	11.1	10.3	10.7	10.5	9.7	9.7	8.8	9.4	10.4	9.3	10
Cyanide (Total)	M	2300	mg/kg	0.5	1.2	3.6	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	< 0.50	< 0.50	1.2	2.7	< 0.50	< 0.50	0.5	< 0.50	< 0.50	1.6	20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	< 0.50	1.3	< 0.50	0.51	3.4	< 0.50	65	1.7	59	15	1.9	11	0.61	1.5	0.78	0.67	0.86	7.8	6	0.56	20	1.3	23	1.9	4.4	2	29
Iron (Total)	N	2430	mg/kg	100	5700.0	5400.0	5600	11000	58000	30000	26000	13000	26000	20000	70000	24000	6500	5400	5500	17000	9800	26000	26000	< 100	8800	3500	8200	2200	4800	3900	6000
Arsenic	M	2450	mg/kg	1	2.4	3.2	4.2	6.1	16	4.9	18	6.3	49	41	13	43	2.4	2.6	1.9	1.4	18	35	19	< 0.5	1.3	2.7	1.2	2	< 0.5	2.3	1.5
Cadmium	M	2450	mg/kg	0.1	< 0.10	0.1	0.28	0.19	0.91	0.57	0.37	0.28	0.31	0.16	0.84	0.69	0.31	0.34	0.14	0.59	0.26	0.4	0.36	< 0.10	0.38	0.25	0.24	< 0.10	< 0.10	0.16	0.55
Chromium	M	2450	mg/kg	1	8.6	8.9	13	13	72	22	23	11	21	17	160	110	24	15	13	160	32	110	130	0.5	8.7	8.7	7.8	4.3	2.8	5.2	7.5
Manganese	M	2450	mg/kg	5	3400	1000	410	1400	2400	840	690	810	490	360	9700	12000	2400	2100	2200	6700	2200	11000	6400	1700	680	1300	840	450	530	750	1100
Copper	M	2450	mg/kg	0.5	4.6	8.6	7	14	27	12	60	11	94	37	35	95	7.1	12	7.1	9.3	12	95	67	0.93	4.8	10	6.3	6.7	1.6	6.9	5.4
Mercury	M	2450	mg/kg	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.08	< 0.05	0.59	0.05	0.42	0.17	0.25	0.66	< 0.05	< 0.05	< 0.05	< 0.05	0.07	0.85	0.89	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2450	mg/kg	0.5	2.6	4.8	5.4	13	39	13	37	9.2	43	25	28	46	3.1	5.8	3.3	3.2	7.3	47	34	1.2	6.9	4.7	7.2	4.1	0.88	4.4	3.6
Lead	M	2450	mg/kg	0.5	5.6	19.0	21	27	64	19	85	160	100	33	170	140	43	45	16	25	30	140	310	2.5	18	19	24	8.8	2.2	6.3	37
Selenium	M	2450	mg/kg	0.2	3.2	1.5	0.61	1.8	2.4	0.81	2.7	0.88	6.3	3.1	2.6	< 0.20	1	0.66	1.3	0.31	1.2	0.28	0.33	0.76	< 0.25	0.72	0.26	< 0.25	< 0.25	0.41	0.56
Vanadium	U	2450	mg/kg	5	30.0	17.0	13	19	88	19	38	17	47	43	160	140	29	26	20	110	80	120	100	< 0.5	27	18	9.5	8.1	6	11	14
Zinc	M	2450	mg/kg	0.5	16.0	37.0	24	25	170	39	130	48	140	55	370	200	110	90	41	91	59	160	160	4.9	24	26	23	18	3.9	13	38
Organic Matter	M	2625	%	0.4	3.0	9.8	15	8.5	5	10	14	6.2	36	7.4	7.6	24	3.8	15	3.3	1.7	8.1	59	64	6.7	2.1	8.1	4.1	3.6	5	9	3.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	3.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	2.3	< 2.0	< 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
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	20	11	3.1	2.8	3.3	4.3	6.4	5.7	5.2	< 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
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	26	9.3	< 2.0	2.6	< 2.0	48	4.8	4.8	9.9	< 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
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	43	5.5	< 3.0	38	< 3.0	180	7.9	4.4	66	< 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
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0	7.8	< 1.0	< 1.0	5.1	< 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	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	92	28	7.9	45	6.9	240	21	17	83	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 1.0	< 1.0	< 1.0	21	< 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	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	1	< 1.0	< 1.0	2.3	< 2.0	< 2.0	< 2.0	< 2.0	5.8	2.1	2.1	8.1	< 1.0	< 1.0	< 1.0	< 1.0	5.1	< 1.0	36	< 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	< 1.0	< 1.0	< 2.0	< 2.0	2.4	< 2.0	< 2.0	7.5	7.7	< 2.0	7.4	< 1.0	< 1.0	< 1.0	< 1.0	44	< 1.0	88	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8	< 1.0	< 1.0	1.7	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	14	10	< 5.0	17	< 5.0	< 5.0	< 5.0	< 5.0	49	< 5.0	150	< 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	< 10	< 10	96	30	12	48	< 10	250	32	20	100	< 10	< 10	< 10	< 10	49	< 10	150	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	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	< 1.0	< 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
Toluene	M	2760	µg/kg	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	< 1.0	< 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
Ethylbenzene	M	2760	µg/kg	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	< 1.0	< 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
m & p-Xylene	M	2760	µg/kg	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	< 1.0	< 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
o-Xylene	M	2760	µg/kg	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	< 1.0	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	0.31	< 0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	1.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	0.47	< 0.10	< 0.10	0.66	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45	< 0.10	< 0.10	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.44	< 0.10	< 0.10	< 0.10	< 0.10	0.34	< 0.10	< 0.10	0.32	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	0.45	< 0.10	3.4	0.71	0.41	0.62	0.6	3	0.47	2.5	4.1	0.29	< 0.10	0.52	0.61	< 0.10	0.51	0.32	0.42
Anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.69	0.22	0.12	0.13	0.13	1.1	< 0.10	1	0.91	< 0.10	< 0.10	0.33	0.24	< 0.10	0.15	0.12	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.3	0.2	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10	0.47	< 0.10	5.6	1.1	0.32	0.87	0.6	8	0.58	4.1	6.4	0.74	< 0.10	0.94	0.53	< 0.10	0.81	0.32	0.29
Pyrene	M	2800	mg/kg	0.1	0.2	0.2	< 0.10	< 0.10	< 0.10	< 0.10	0.2	< 0.10	0.43	< 0.10	4.2	1	0.31	0.8	0.59	7.3	0.6	3.2	4.5	0.67	< 0.10	0.77	0.48	< 0.10	0.63	0.28	0.25
Benzo[a]anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	2.2	0.74	< 0.10	0.41	0.26	5.4	0.37	2.2	3.2	0.44	< 0.10	0.61	0.45	< 0.10	0.32	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.21	< 0.10	1.9	0.7	< 0.10	0.3	0.35	6.3	0.49	2.5	3.4	0.35	< 0.10	0.46	0.4	< 0.10	0.45	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.1	1.7	< 0.10	0.73	0.3	9	0.42	4.1	5.2	0.28	< 0.10	0.87	0.5	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	0.49	< 0.10	0.34	0.17	4	0.25	1.1	1.4	0.36	< 0.10	0.33	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.2	0.85	< 0.10	0.28	0.35	8.2	0.42	2.8	2.8	0.2	< 0.10	0.43	0.31	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.9	0.72	< 0.10	< 0.10	< 0.10	5.3	< 0.10	2.9	2.8	< 0.10	< 0.10	0.43	0.48	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.22	< 0.10	< 0.10	< 0.10	0.74	< 0.10	0.43	1.1	< 0.10	< 0.10	0.32	0.31	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.1	0.91	< 0.10	< 0.10	< 0.10	5.2	< 0.10	1.9	2.5	< 0.10	< 0.10	0.68	0.41	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.2	< 2.0	33	9.4	< 2.0	4.5	3.4	65	3.6	29	41	3.3	< 2.0	6.7	5.1	< 2.0	2.9	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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					Job No.:	210130-32	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210130-32	210115-27	210115-27	210130-32	210130-32	Number of Samples	Number of Exceedances	Minimum Value	Minimum Exceedance	Maximum Value	Average Value	95th Percentile
					Sample ID.:																				
					Client Sample Ref.:	AL32-1	AW26-1	AV28-1	AV28-2	AV28-3	AV29-1	AV29-2	AW29-1	AW29-2	AK33-1	AM33-1	AM33-2	AK34-1	AK34-2							
					Sample Type:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID							
					Top Depth (m):	0.50-0.50	0.50-0.50	0.30-0.30	1.20-1.20	2.20-2.20	0.80-0.80	1.70-1.70	0.60-0.60	1.30-1.30	0.20-0.20	0.30-0.30	1.30-1.30	0.80-0.80	1.60-1.60							
					Bottom Depth (m):																				
					Date Sampled:	1/28/2021	12/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	1/29/2021	13/01/2021	13/01/2021	1/29/2021	1/29/2021							
					Asbestos Lab:																				
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		Detected		Not Detected	Not Detected			Not Detected	83	4	0.001	0.063	0.063	0.021	0.054
Asbestos by Gravimetry	U	2192	%	0.001								<0.001													
Total Asbestos	U	2192	%	0.001																					
Moisture	N	2030	%	0.020	9.4	13	9.8	19	21	15	12	12	18	12	8.3	8.6	11	13							
Soil Colour	N	2040		N/A	Black	Dark Brown	Dark Brown	Black	Black	Dark Brown	Black	Black	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown							
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Vegetation	Stones	Stones	None	Vegetation							
Soil Texture	N	2040		N/A																					
pH	M	2010		4.0	11.3	9.52	9.4	11.5	11.3	11.3	8.31	9.1	11.2	10.2	12.6	11.8	9.51	10.2							
Cyanide (Total)	M	2300	mg/kg	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	32	0.50	2.50	68.00	2.82	11.65
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	<12	<12	<12	<12	<12	<12	127	<12	<12	<12	<12	<12	<12	<12	148	0	0.50	0.00	0.00	8.20	37.90
Iron (Total)	N	2430	mg/kg	100	138000	64300	208000	143000	146000	321000	14800	222000	291000	134000	180000	65800		101000			100.00	0.00	0.00	34268.71	136800.00
Arsenic	M	2450	mg/kg	1	8.28	11	7.62	9.8	11.7	17.2	4.66	15.6	17.3	9.69	7.22	9.12	13.6	15.9	148	0	0.50	0.00	0.00	13.78	35.65
Cadmium	M	2450	mg/kg	0.1	1.87	<0.2	0.802	<0.2	<0.2	4.82	0.297	1.18	3.89	1.6	<0.2	0.258	1.49	1.34	148	0	0.10	0.00	5.40	0.57	1.67
Chromium	M	2450	mg/kg	1	160	399	219	<9	<9	<9	<9	<9	65.1	75	628	121	119	33.8	148	0	0.50	0.00	700.00	62.04	226.50
Manganese	M	2450	mg/kg	5	12900	18900	8970	4270	4290	10900	2880	6090	12000	8420	209000	5090	8330	6690			240.00	48000.00	209000.00	7136.35	18235.00
Copper	M	2450	mg/kg	0.5	20.4	40.3	19.1	19.6	17.8	43.9	14.3	25.7	34.1	22.4	14.5	23.8	23.3	20.2	148	0	0.93	0.00	200.00	24.70	65.25
Mercury	M	2450	mg/kg	0.1	<1	<1.4	<1.4	<1.4	<1.4	<1.4	<0.14	<1.4	<1.4	<1	<1.4	<1.4	<1	<1	148	0	0.050	0.000	8.700	0.314	1.400
Nickel	M	2450	mg/kg	0.5	34.6	26.4	29.5	20.7	21.3	41.6	7.14	29.7	32.9	45.9	24.6	45.1	26.5	27.2	148	0	0.88	0.00	270.00	19.45	43.65
Lead	M	2450	mg/kg	0.5	37.6	49.9	29.1	51.4	74	1400	31.7	242	1100	72	22.5	23.5	67.5	44.3	148	0	2.20	0.00	1400.00	75.80	176.50
Selenium	M	2450	mg/kg	0.2	<10	16.7	<10	<10	<10	<10	6.48	<10	<10	<10	22.7	<10	<10	<10	148	0	0.20	0.00	22.70	2.16	10.00
Vanadium	U	2450	mg/kg	5	157	622	146	64.6	69	156	22.1	78.6	168	139	571	96	134	53.6	148	0	0.50	0.00	660.00	71.00	196.50
Zinc	M	2450	mg/kg	0.5	98.7	205	180	128	170	2780	83	718	2990	212	63.9	86.6	196	120	148	0	3.90	0.00	5700.00	195.41	376.50
Organic Matter	M	2625	%	0.4	18.1	4.34	26	49.1	44	11.5	1.45	24.7	19.7	9.43	1.19	10.3	10.1	4.14							
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0136	<0.01	<0.01	0.0182	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	148	0	0.01	0.00	1.00	0.85	1.00
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	<0.01	<0.01	<0.01	0.036	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01	0.0164	<0.01	<0.01	148	0	0.01	0.00	9.90	0.91	1.00
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0372	<0.01	<0.01	0.0855	<0.01	<0.01	<0.01	<0.01	0.0164	<0.01	<0.01	148	0	0.01	0.00	330.00	3.63	1.00
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	0	1.00	0.00	1300.00	14.07	11.23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	<1	<1	<1	2.05	1.17	<1	4.07	<1	<1	<1	1.26	<1	<1	<1	148	0	1.00	0.00	4900.00	56.61	40.45
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	4.38	5.28	1.79	6.72	6.34	20.5	6.36	6.38	10	<1	9.88	3.97	1.1	<1	148	0	1.00	0.00	5200.00	65.23	99.00
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	18.7	18.9	8.62	12.4	10.8	38	17	10.8	33	8.24	62.7	8.72	8.1	6.57	148	0	1.00	0.00	6800.00	153.58	642.50
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	<1	4.98	<1	2.22	1.3	1.09	6.1	<1	1.51	<1	16.4	1.08	<1	<1	148	0	1.00	0.00	630.00	7.03	4.01
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	24.3	30.1	11.3	23.4	19.6	60.4	33.5	18.5	44.8	9.5	90.2	14	9.88	8							
Aromatic TPH >C5-C7	N	2680	mg/kg	1	<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	148	0	0.01	0.00	1.00	0.85	1.00
Aromatic TPH >C7-C8	N	2680	mg/kg	1	<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	148	0	0.01	0.00	1.00	0.85	1.00
Aromatic TPH >C8-C10	M	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0248	<0.01	<0.01	0.057	<0.01	<0.01	<0.01	<0.01	<0.01	0.0109	<0.01	148	1	0.01	240.00	240.00	2.66	1.00
Aromatic TPH >C10-C12	M	2680	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	1	1.00	710.00	710.00	6.93	1.00
Aromatic TPH >C12-C16	M	2680	mg/kg	1	<1	<1	<1	1.64	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	2	1.00	840.00	3200.00	29.78	1.00
Aromatic TPH >C16-C21	U	2680	mg/kg	1	<1	<1	1.89	3.73	2.72	2.14	<1	<1	1.72	1.35	<1	7.12	<1	<1	148	1	1.00	3100.00	3100.00	29.30	9.99
Aromatic TPH >C21-C35	M	2680	mg/kg	1	43.5	22.6	15.2	12.3	10.5	5.16	4.64	25.9	8.78	9.84	13.6	25.8	10.3	7.01	148	0	1.00	0.00	4400.00	76.22	159.00
Aromatic TPH >C35-C44	M	2680	mg/kg	1	1	2.6	2.63	<1	<1	<1	<1	2.71	<1	<1	<1	5.02	1.07	<1	148	0	1.00	0.00	2000.00	15.24	2.67
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	45.2	25.7	19.8	18.7	15.1	8.8	6.04	29	11.6	12.3	15.5	38.3	11.8	8.07							
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	69.5	55.8	31.1	42.2	34.7	69.2	39.7	47.5	56.3	21.8	106	52.3	21.6	16.1							
Benzene	M	2760	µg/kg	1	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	148	0	1.00	0.00	180.00	18.19	180.00
Toluene	M	2760	µg/kg	1	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	148	0	1.00	0.00	140.00	14.27	140.00
Ethylbenzene	M	2760	µg/kg	1	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	148	0	1.00	0.00	80.00	8.50	80.00
m & p-Xylene	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	148	0	1.00	0.00	200.00	20.04	200.00
o-Xylene	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	148	0	1.00	0.00	200.00	20.09	200.00
Methyl Tert-Butyl Ether	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200							
Naphthalene	M	2800	mg/kg	0.1	0.0447	0.0251	0.0488	0.102	0.0549	0.0383	0.0112	0.0135	0.0477	0.0421	0.0185	0.123	0.0599	0.023	148	0	0.01	0.00	5.00	0.28	1.27
Acenaphthylene	N	2800	mg/kg	0.1	0.0383	<0.012	0.0258	0.0172	<0.012	<0.012	<0.012	<0.012	<0.012	0.0315	<0.012	0.224	0.0461	<0.012	148	0	0.01	0.00	7.80	0.25	0.65
Acenaphthene	M	2800	mg/kg	0.1	<0.008	<0.008	0.00957	0.0564	0.0112	<0.008	<0.008	<0.008	0.0179	<0.008	0.015	0.0133	<0.008	<0.008	148	0	0.01	0.00	25.00	0.27	0.18
Fluorene	M	2800	mg/kg	0.1	0.0116	<0.01	0.0208	0.211	0.0274	0.012	<0.01	<0.01	0.0292	<0.01	<0.01	0.125	<0.01	<0.01	148	0	0.01	0.00	13.00	0.21	0.39
Phenanthrene	M	2800	mg/kg	0.1	0.137	0.0722	0.293	0.442	0.183	0.113	0.0287	0.046	0.182	0.0923	0.133	0.972	0.12	0.0428	148	1	0.03	110.00	110.00	1.68	3.07
Anthracene	M	2800	mg/kg	0.1	0.0436	<0.016	0.0733	0.0792	0.0379	<0.016	<0.016	<0.016	0.049	0.0276	0.0233	0.54	0.0336	<0.016	148	0	0.02	0.00	21.00	0.48	1.50
Fluoranthene	M	2800	mg/kg	0.1	0.354	0.122	0.417	0.347	0.268	0.0829	0.0285	0.0414	0.294	0.193	0.273	2.53	0.301	0.0891	148	9	0.03	8.00	68.00	2.37	8.72
Pyrene	M	2800	mg/kg	0.1	0.276	0.117	0.324	0.312	0.232	0.0728	0.0246	0.0371	0.293	0.143	0.204	1.75	0.259	0.0737	148	0	0.02	0.00	51.00	1.98	8.60
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.243	0.0723	0.228	0.26	0.2	0.0221	0.0165	0.026	0.125	0.104	0.131	1.27	0.184	0.055	148	0	0.02	0.00	20.00	1.21	5.30
Chrysene	M	2800	mg/kg	0.1	0.21	0.0778	0.245	0.258	0.219	0.0251	0.016	0.0346	0.136	0.101	0.179	1.37	0.157	0.0606	148	0	0.02	0.00	21.00	1.29	6.37
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.426	0.119	0.226	0.383	0.316	0.0191	0.028	0.0582	0.196	0.186	0.319	1.62	0.388	0.104	148	22	0.02	4.00	33.00	2.03	9.13
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.13	0.0357	0.0922	0.14	0.102	<0.014	<0.014	0.0171	0.0509	0.0615	0.0979	0.537	0.104	0.0295	148	5	0.01	5.90	11.00	0.71	3.58
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.271	0.0639	0.182	0.311	0.215	<0.015	<0.015	0.0259	0.106	0.111	0.128	0.986	0.195	0.0567	148	0	0.02	0.00	26.00	1.54	7.82
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	0.269	0.0549	0.134	0.203	0.137	<0.018	<0.018	0.022	0.0935	0.128	0.167	0.813	0.221	0.0622	148	0	0.02	0.00	23.00	1.19	6.12
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.0476	<0.023	0.0385	0.0575	0.0426	<0.023	<0.023	<0.023	<0.023	<0.023	0.0337	0.172	0.0344	<0.023	148	0	0.02	0.00	3.90	0.26	1.07
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.231	0.0575	0.139	0.209	0.145	<0.024	<0.024	<0.024	0.0793	0.113	0.147	0.723	0.169	0.0502	148	2	0.02	18.00	22.00	1.08	5.59
Total Of 16 PAH's	N	2800	mg/kg	2	2.73	0.818	2.5	3.39	2.19	0.385	0.153	0.322	1.7	1.33	1.87	13.8	2.27	0.647							
Resorcinol	M	2920	mg/kg	0.02																					
Phenol	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	148	0	0.01	0.00	0.88	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							
Xylenols	M	2920	mg/kg	0.02	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015							
1-Naphthol	N	2920	mg/kg	0.02																					
Trimethylphenols	M	2920	mg/kg	0.02																					
Total Phenols	M	2920	mg/kg	0.1	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035							

Appendix C: Phase 5E2 DS GIR

Glan Llyn
Phase 5E2

Desk Study & Phase 2 Geo-Environmental Interpretative Report

Glan Llyn, Newport

Phase 5E2

Desk Study & Phase 2 Geo-Environmental Report

For

Brighton STM Developments Limited (BSTMDL)

DATE: August 2026

REV: P01

18669-RLL-24-XX-RP-O-0627-P01

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Revision Status	Date	Summary of Revision
P01	August 2026	First Issue

Executive Summary

This presents the salient points of the report and should not be referred to in isolation.

Summary	Rodgers Leask Ltd (RLL) were commissioned by Brighton STM Developments Ltd (BSTMDL) to prepare a combined Desk Study and Phase 2 Geo-Environmental Interpretative Report for Phase 5E2 of the Glan Llyn development on the former Llanwern steelworks (hereafter referred to as the 'Site'). The Site is proposed to be developed for residential end-use with gardens, open space and associated infrastructure.
Site Location and Description	The Site is irregular in shape and covers approximately 7.0 hectares and is located within the Glan Llyn development at the former Llanwern Steelworks, approximately 5.8km to the east of Newport at National Grid Reference 336520E, 186397N. Prior to the recent earthworks, the site comprised an area used for the storage of excavated Made Ground originating from the wider Llanwern Site.
History	Historically, the Site exclusively comprised agricultural land segregated into seven fields by hedgerows and drains, until 1967 when the Site formed part of Llanwern Steelworks. Following construction of the steelworks, the eastern side of the Site comprised open space with tracks, posts and part of a pipeline and water tower. The central and western areas of the Site was occupied by two travelling booms that extended east to west along the northern boundary of the Site. A Lime Plant was located in the approximate centre of the Site with hoppers, conveyors, pipeline and grids. Railway sidings entered the Site from the northwest with an associated embankment. As the steelworks expanded, numerous unnamed buildings were located within the Site and a Hydrogen Production Plant was positioned on the southeastern section of the Site. Additionally, a pond was located on the southeastern corner of the Site, connecting to a southern reen. The Site was partially demolished by 2006 and above ground structures were completely demolished to slab level by 2009.
Geology / Ground Conditions	Previous ground investigations, undertaken by Atkins (2014/ 16) and RLL (2020/ 21), encountered Made Ground from ground level within all exploratory holes at thicknesses of 0.20m to 3.00m overlying Tidal Flat Deposits from depths of 1.10m to 10.60m, which generally comprised soft to firm silty clay with a horizon of silty clayey amorphous peat from 3.90m to 6.00m. The Tidal Flat Deposits were found to overly the Mercia Mudstone Group from 10.60m to a maximum encountered depth of 12.35m. Seven locations refused at depths between 0.60m and 1.50m within slag layers or large cobbles/ boulders, due excavation difficulties. Oily sheens or hydrocarbon odours were not encountered in the 2021 RLL ground investigation. Buried obstructions such as concrete piles and rebar were encountered in three locations at depths of between 0.70m to 2.60m in the 2021 RLL ground investigation. Perched water was encountered in 14 locations, at depths of between 0.50m to 1.50m. Regional groundwater was encountered twice within

	one location (CWCP18) within the very soft fibrous peat of the Tidal Flat Deposits at 6.00mbgl rising to 5.00mbgl, and again within the very stiff silty clay of the Mercia Mudstone Group at 12.10mbgl rising to 11.00mbgl. A radiological walkover survey was undertaken for the Site in 2022 and concluded that radiation within the surveyed area was not elevated above site specific background radiation levels.
Hydrology and Hydrogeology	The Mercia Mudstone Group is classified as a Secondary B Aquifer. The Tidal Flat Deposits are classified as Secondary (Undifferentiated) Aquifer. The Site is located within a privately drained system. Drain 4 and its associated treatment lagoon is present on the eastern boundary of the Site, this is to be removed in the final development. The next nearest surface water feature, on completion of the development, is proposed to be located approximately 160m north of the Site. The Site lies within an area shown as having a Low Flood Risk from Sea according to Natural Resources Wales Flood Risk mapping.
Controlled Waters	With regard to controlled waters, the following pathways are considered applicable to the Site, following completion of the development and once relevant approvals have been granted to allow discharge into Monks Ditch: ▪ Leaching of soil-borne contamination in Made Ground and subsequent lateral migration through permeable pathways in Made Ground to Monks' Ditch via onsite reens; and ▪ Newly created preferential pathways associated with the redevelopment of the Site e.g. foundations and infrastructure. As such, it is recommended that this report is read in conjunction with the Phase Specific Controlled Waters Risk Assessment.
Contamination (Human Health)	Chemical analysis has identified concentrations higher than the S4ULs for a residential end use with plant uptake (1% SOM) for arsenic, nickel, lead, vanadium, zinc, aliphatic TPH >C8-C10, aliphatic TPH >C10-C12, aliphatic TPH >C12-C16, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, aromatic TPH >C21-C35, aromatic TPH >C35-C44, benzene, phenanthrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[a]pyrene and dibenz(a,h)anthracene across the Site. Asbestos was identified within 4 of the 83 soil samples tested in the form of loose fibres at concentrations of <0.001% to 0.063%. The presence of asbestos and elevated contaminants identified on site are a risk to human health and will be managed through the remedial works.
Ground Gas and Radon	No gas monitoring was undertaken during the RLL 2021 ground investigation. A programme of shallow gas monitoring is recommended following any turnover and earthworks reengineering. The Site is located in an area where 1-3% of properties being above the action level, however no radon protection measures are required in the construction of the new development.
Recommendations	Following the completion of the ground investigations, RLL recommends the following are completed:

	▪ Removal of identified hotspot contamination on a grid square basis, and subsequent validation testing and reporting. ▪ Turnover of the Made Ground to natural geology with removal of obstructions. ▪ Reengineering of materials in accordance with the approved Remediation Strategy and Earthworks Specification to an appropriate specification to achieve the required formation level. ▪ Chemical and geotechnical validation of the placement of material following turnover. ▪ A programme of shallow gas assessment is recommended following the earthworks to turnover and reengineer the Site. ▪ Concrete classification testing should be undertaken in accordance with BRE Special Digest 1. ▪ Phase-specific geotechnical assessments relating to the proposed development. ▪ Construction of buildings and hardstanding with suitable construction materials to break the pathway with underlying Made Ground, to intercept rainwater and to reduce infiltration. ▪ A 600mm clean cover system, suitable for a residential with plant uptake end use, will be required in areas of residential gardens and landscaping. ▪ Consultation with the water supply company in relation to the potential use of barrier pipe. ▪ Preparation of a Piling Risk Assessment; ▪ Preparation of an MMP to facilitate the reuse of excavated materials and import of soil for use in the cover system.

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1.0 Introduction

1.1. Terms of Reference

Rodgers Leask Ltd (RLL) was commissioned by Brighton STM Developments Ltd (BSTMDL) to prepare a combined Desk Study and Phase 2 Geo-Environmental Interpretative Report for Phase 5E2 of the Glan Llyn development in Newport (hereafter referred to as the 'Site').

The Site is situated within the ongoing redevelopment of the former Llanwern Steelworks. The Site location plan is shown on Drawing 18669-RLL-22-XX-RP-O-0298, included in **Appendix A**.

In July 2024 the Client, St Modwen Developments, was rebranded to be called Revantage Real Estate, then in 2025 to Brighton STM Developments Limited (BSTMDL). Any reference to the previous company names in this report should be referred to accordingly.

1.2. Proposed Development

It is understood that the Site is proposed to be redeveloped for a residential end use with gardens and public open spaces. An illustrative masterplan (ref. 8111-08-A011, Rev P09, dated April 2019) is available in **Appendix A**.

The development will form part of the wider Glan Llyn development.

1.3. Purpose

This report has been prepared to support the discharge of Planning Condition 27 of the Outline Planning Permission Reference 06/0471 for the proposed development of residential development Phase 5E2 as part of a wider mixed-use development at Llanwern, Newport.

Planning Condition 27 states the following.

"(27) Prior to the commencement of each phase of development as defined by Condition 03 (or at such other date or stage in development or for such specified activities or works as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination relating to that phase or activity shall each be submitted to and approved, in writing, by the Local Planning Authority:

(1) A preliminary risk assessment which has identified:
- *(a) all previous uses;*
- *(b) potential contaminants associated with those uses;*
- *(c) a conceptual model of the site indicating sources, pathways and receptors;*
- *(d) potentially unacceptable risks arising from contamination at the site.*

(2) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off site.

(3) The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.

(4) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer term monitoring of pollutant linkages, maintenance and arrangements for contingency action. Any changes to these components require the express consent of the Local Planning Authority.

Reason: To ensure that the proposed development will not cause pollution of the environment or harm to human health."

The scope of this report is detailed in Section 1.4 below. It is considered that this report addresses the requirements of Condition 27 part 1 and 2. Part 3 and part 4 will be addressed in future reporting including a Remediation Strategy and Validation Report.

1.4. Objectives

The objectives of this report is to:

- Obtain desktop information to assist in the assessment of potential environmental and ground related issues that may have implications for the proposed development.
- Review the available information to determine the anticipated ground conditions and identify the potential for contamination to be present within the Site boundary, including formulation of an initial Conceptual Site Model.
- Present the findings of the ground investigations, by others, undertaken to date, providing an indication of the nature and extent of any contamination within the Site.
- Produce a refined Conceptual Site Model for the site using the findings of the desktop study and ground investigation works, including identification of Source Pathway Receptor Linkages that require mitigation.
- Make outline recommendations for remedial actions, where required, to mitigate unacceptable risks.

1.5. Scope

In order to achieve the outlined objectives, the scope of the study includes:

- A review of existing geo-environmental data for the Site including a review of historical maps and existing ground investigation data.
- A site visit/ walkover survey.
- Undertake an intrusive ground investigation, including chemical and geotechnical laboratory testing.

- An assessment of the levels of contamination present within the soils on Site against generic screening criteria based on the results of laboratory testing of samples collected during the investigation.

1.6. Sources of Information

The following documents and data sources have been reviewed in preparation of this Desk Study & Phase 2 Geo-Environmental Interpretative Report and should be read in conjunction with it:

- Landmark Envirocheck Report, Historical Map Pack (**Appendix C**).
- Landmark Envirocheck Report, Datasheet. 287158115_1_1, dated November 2021 (**Appendix D**).

The following reports have been prepared to be read in conjunction with this report:

- IOM, Assessment of asbestos contamination at former Llanwern Steelworks Site, Newport, Wales, ref. 610-34464 Rev 1, dated March 2024; and
- RLL, Phase 5E2 Controlled Waters Detailed Quantitative Risk Assessment Addendum, ref. 18669-RLL-24-XX-RP-O-0635-P01, dated August 2026.

1.7. Limitations and Confidentiality

All conclusions and recommendations made within this report are based upon and limited to the factual information obtained as part of this investigation. 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.

No liability can be accepted for conditions not revealed within the exploratory holes or pits undertaken by this investigation. The exploratory points cover only a small proportion of the total site area. RLL has where necessary undertaken extrapolation between locations and no responsibility can be taken for different conditions which may occur between locations.

RLL has undertaken the work in accordance with our understanding of current best practice at the time of undertaking the report. Further assessment and revision of the 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.

At the time of writing, detailed information on the proposed structures, such as detailed layout, loadings and serviceability limits, was not available. Accordingly, where geotechnical design advice is provided it is for information only and should be

reassessed by a competent specialist once the development layout and structural loadings are known.

2.0 Site Location and Description

2.1. Site Location

The Site is located within the Glan Llyn development at the former Llanwern Steelworks, approximately 5.8km to the east of Newport City Centre, at approximate National Grid Reference 336520E, 186397N. The wider Glan Llyn development covers approximately 250 hectares and is proposed to be redeveloped for residential, commercial and open space use. The Site location plan is included on RLL Drawing 18669-RLL-22-XX-RP-O-0298 in **Appendix A.**

The Site is irregular in shape covering an area of approximately 7.0ha and is located on the southern boundary in the southeast corner of the wider Glan Llyn development.

The Site historically housed various infrastructure associated with the former Llanwern Steelworks including a travelling boom, drive house, Holts domestic water tower, lime kilns, screen house, hoppers, conveyors, lime bunkers, radioactive store and the air products hydrogen plant.

Drain 4 crossed the western side of the Site in an approximate north-south orientation. The Site currently comprises an area used for the stockpiling of construction materials and Made Ground from the wider Llanwern development, with the Biogenie Water Treatment Facility located along the western boundary on Drain 4.

The Site boundary is shown on drawing PJA Drawing 02554-F-5E210, **Appendix A**.

2.2. Site Boundaries and Surrounding Area

- North: The Site is bounded to the north by the wider undeveloped Glan Llyn development.
- East: To the east, is Monks' Ditch River, beyond which is Queens Way Road and the developed part of Indurent Park, Newport.
- South: The Site is bounded to the south by Queens Way (A4810) Road, beyond which is the Tarmac Llanwern Concrete Plant and agricultural fields.
- West: To the west of the Site is Phase 4H, which forms part of the Glan Llyn development currently undergoing construction.

The southern Site boundary is physically bounded by 2m high metal palisade fencing and the western boundary comprises heras fencing. The eastern boundary is physically bounded by Monks' Ditch River, beyond which there is temporary metal mesh fencing that borders Queens Way Road. There are no physical boundaries along the northern Site boundary.

2.3. Site Walkover

A site walkover was conducted in August 2021 by an RLL Engineer. The purpose of the site walkover was to provide a general description of the Site. Copies of relevant photographs are included in **Appendix B**.

At the time of the walkover, the Site had been demolished to slab level and housed several stockpiles of subsoil material, several smaller stockpiles of construction materials; and stockpiled Made Ground originating from the wider Llanwern site. The southwest corner of the Site housed the Biogenie Water Treatment Facility on Drain 4 and a main haul route ran through the stockyard with numerous smaller haul routes and tracks were present.

Vegetation was predominantly found on overgrown stockpiles and along the southern Site boundary palisade fencing along the Queensway, very little vegetation was present on the open areas and haul routes.

2.4. Site History - Ordnance Survey Maps

Historical Ordnance Survey maps have been assessed to identify former land uses at the Site and the surrounding area. Records have been obtained from a Landmark Envirocheck Report commissioned for Site in 2022 (**Appendix C**).

Map Date	Site Feature	Adjacent Features
1883 – 1887 OS	The Site comprised part of five open fields, segregated by drains hedgerows and trees. Black Wall Reen is shown to cross the eastern side of the Site in an approximate north to south orientation. A sluice gate system is indicated on the northeast corner of the Site, where Black Wall Reen splits to the east to form Brass Gout Reen. Non-coniferous trees are shown to line the eastern side of Black Wall River and a footpath is shown on the western side.	Surrounding land is characterised by open agricultural fields segregated by reens and trees. Black Wall Reen extends beyond the Site in an approximate north to south orientation, with no flow direction indicated. Middle Reen is located approximately 20m west of the Site in a northwest to southeast orientation, with a southerly flow direction. Beyond which are Kings Wall Reen and Ellens Reen. A farmhouse is located approximately 30m north of the Site. Decoypool Farm and Decoy Pool (marshy pond) are located approximately 480m northwest of the Site. The Great Western Railway (South Wales Division) Mainline and Llanwern Station are located approximately 440m north the Site. The mainline is orientated approximately east to west. Various farms and residential properties are shown within approximately 1km (Monkspill Cottage 850m north, Pwll-pan 1km north, Tatton Farm 900m southwest, New House 600m southeast).

Map Date	Site Feature	Adjacent Features
1902 OS	Little significant change is observed within the Site, with the exception of the removal of trees on the field boundaries. Additionally, Black Wall Reen is shown to have a southerly flow direction and Brass Gout Reen is shown to flow west towards the sluice gate system.	Coniferous and non-coniferous trees are shown alongside Brass Gout Reen. Decoy Pool is renamed Old Decoy Pool. Little significant change is observed within 1km. A trigonometrical station is located approximately 10m north of the Site.
1921-1922 OS	Little significant change.	Llanwern Lime Works and Goods Shed located from approximately 900m north. Ellens Reen and Middle Reen are indicated to have a southerly flow direction.
1954 OS	No significant change.	Llanwern Golf Club House is shown to the north of the Great Western Railway line. Roman Burials (found AD 1925) shown to the west of Llanwern Golf Club.
1965 OS	No significant change.	Little significant change is observed within 1km.
1967-1968 OS	The Site is shown to form part of the Spencer Steelworks (later known as the Llanwern Steelworks). The eastern side of the Site largely comprised open space inclulding tracks, posts, part of a pipeline and a water tower. The central and western parts of the Site comprised two travelling booms that extended east to west along the northern boundary of the Site. A Lime Plant was located in the approximate centre of the Site with associated hoppers, conveyors, pipeline and grid. A track crosses the Site running east to west, with an embankment shown on the western side where the track branches out to encircle an unnamed large building (presumed to be a substation). Railway sidings extend into the northwest corner of the Site.	Mapping shows the surrounding area to comprise the Spencer Steelworks (later known as the Llanwern Steelworks). Within the steelworks, land to the north largely comprised open space with various tracks, unnamed buildings, conveyors, hoppers, chimneys, pipelines and gas holder. Railway sidings extend from the west of the site northwards, beyond which is marshy ground, ponds, drains, various tanks and a cooling tower. The Site is bounded to the south by Queens Way Road, beyond are drains orientated east to west, marshy ground, ponds and a Slag Processing Plant with associated infrastructure and slag heaps. Land to the immediate east of the Site is bounded by the now channelised Monks Ditch River, formed into two conduits with a southerly flow direction. Beyond Monks Ditch is characterised by marshy ground and ponds.
1973 OS	Little significant change.	Previous marshland and ponds located to the east of the Site now shown as open space with a road extending north to south. The tanks located to west of the Site are shown to form part of the Benzole Refinery. To the northwest of the Site a Benzole Plant and Benzene Plant with associated gas holder, conveyors and travelling charger car are present.

Map Date	Site Feature	Adjacent Features
1983 – 1989 OS	The Site evolved in line with the expansion of the steelworks, with the Lime Plant removed from the centre of the Site. The track road on the western side of the Site no longer extends around the western unnamed building but instead meanders down to the southwest corner of the Site. A drain surrounded by an embankment follows the southern Site boundary in an approximate east to west orientation, partially up the eastern Site boundary. The southeastern part of the Site now comprises numerous conveyors and unnamed buildings with connecting roads. Railway sidings are no longer present on the western side of the Site.	Additional infrastructure associated with the steelworks is located to the east of the Site, including a cooling tower, conveyor, unnamed buildings and connecting roads. The land to the south of the Site has evolved in line with the southwestern section of the Site, with numerous conveyors and unnamed buildings with connecting roads. Coal storage dumps are shown in the open space. The majority of the railway sidings that were previously located to the west of the Site have been removed. The marshy ground is now open space with further conveyors, chimneys, unnamed buildings and roads beyond.
1992 OS	Little significant change.	Little significant change.
1995 OS	A Hydrogen Production Plant now occupies the southeastern area of the Site, with associated tanks and buildings. A pond is shown in the southeast corner of the Site, connected to southern watercourse. Embankments are shown on the western and eastern sides of the Site.	Several embankments, pits and tracks are located to the north, south, west and east of the Site.
2001 Aerial Photography	Little significant change.	Little significant change.
2006 OS	Little significant change.	Little significant change.

Map Date	Site Feature	Adjacent Features
2021 OS	Above ground structures associated with the Llanwern Steelworks have been demolished within the Site, leaving vacant land in its place.	The land surrounding the west and south of the Site comprises open space following the demolition of above ground structures associated with the Llanwern Steelworks. To the east of the Site, beyond Monks Ditch, the Queens Way Road has been renamed Monks Ditch Drive. Beyond which the Celtic Business Park has begun development with three commercial units shown to the south and the CAF factory shown to the north. A residential area associated with the Glan Llyn development is shown approximately 480m west of the Site. Notable features include Glan Llyn West Primary School, numerous residential houses with private gardens, numerous roads, recreational park areas and an updated surface water drainage network.

2.5. Site History – Aerial Photographs

Historical aerial photography included in the Landmark Envirocheck Report and photography from other sources[1] provides additional information relating to the Site (**Appendix C**).

1947: Low resolution black and white photography shows the Site comprising fields use for agricultural purposes. Monks Ditch is visible to the east and Decoy Pool and Decoypool Farm are identifiable to the north of the Site.

1979: Low resolution black and white photography shows the Site to comprise part of the Llanwern Steelworks. The travelling boom can be observed running parallel to the northwestern boundary and conveyors are present on the northeastern side of the Site. The lime plant and associated conveyors and hoppers are observed in the centre of the Site and access roads and tracks are photographed across the eastern and central parts of the Site. A water tank is present in the south-east corner of the Site.

1985: Low resolution colour photograph shows limited change to the eastern side of the Site. The lime plant along with associated conveyors and hoppers has been demolished in the centre of the Site.

1991: Moderate resolution colour photograph shows clusters of trees around the travelling boom on the northern Site boundary. A large material stockpile is photographed across the south-central to southwestern side of the Site and the Hydrogen Production Plant is seen to occupy the southeastern corner of the Site.

2006: Moderate resolution colour photograph shows much of the Site to have undergone demolition to slab level, with the footprint of the demolished buildings and

[1] Google Earth Pro, Accessed 27/02/2026, BNG 336317E, 186693N, URL: https://earth.google.com/

hydrogen production plant visible. The substation is still standing on the western side of the Site, along with a smaller building in the southwest corner. Four stockpiles in the centre of the Site and evidence of excavations on the eastern side of the Site.

2016: Moderate resolution colour photograph shows all remaining above ground structures demolished. The majority of the Site is covered by numerous large stockpiles in the form of windorws, orientated east to west on the central to eastern side of the Site and north to south on the north-western side of the Site. A carpark associated with the Glan Llyn development compound is present on the southwest corner of the Site.

2018: Moderate resolution colour photograph, little change was observed across the Site besides the movement of some stockpiles, with fewer stockpiles observed across the Site. Haul routes can be observed on the north-western and central sides of the Site.

2021: Moderate resolution colour photograph shows the addition of the Drain 4 treatment lagoon associated with the Biogenie Water Treatment Facility on the northwestern corner of the Site. Little change was observed across the rest of the Site, apart from vegetation indicated over the stockpiles and construction materials photographed on the north-east corner.

2.6. Site History - Available Information

According to the Royal Commission on the Ancient and Historical Monuments of Wales[2], the Llanwern Steelworks were built between 1958 and 1962 for Richard & Thomas Baldwin, and was subsequently owned by British Steel, and is currently owned by Tata Steel Europe (formerly known as Corus Group). Reportedly due to the lack of a deep-water iron ore unloading terminal, the Steelworks struggled and steel making ceased in 2001 with demolition commencing in 2004.

Blueprints and a Historical Site Layout Plan of the wider Llanwern Steelworks site indicate that the Site comprised the Lime Plant with associated lime kilns, lime bunkers, conveyors, hoppers and screen house. A travelling boom is located along the northern Site boundary, a water tower and a Drivehouse was located on the eastern side of the Site; numerous tracks and roads were present across the Site. Later blueprints show the Site to comprise an Air Products Hydrogen Plant on the southeast corner, a radioactive store in the centre of the Site and part of a large factory building on the northern section of the Site.

The historical overlays of the Site are shown on RLL Drawings 18669-RLL-22-XX-RP-O-0300 and 18669-RLL-22-XX-RP-O-0299, and the original Operational Site Layout Drawing (ref. 839181, dated December 1999), included in **Appendix A**.

[2] https://coflein.gov.uk/en/site/86821/

3.0 Ground Conditions and Mining Review

3.1. Published Geology

Information pertaining to the underlying ground conditions at the Site has been obtained via the BGS Onshore Geoindex.

The published geological information shows the Site to be void of Made Ground. However, due to the Site's history, Made Ground is likely to be present associated with the previous development and subsequent demolition.

Superficial deposits are shown to comprise Tidal Flat Deposits.

Tidal Flat Deposits are described by the BGS as 'unconsolidated sediment, mainly mud and/ or sand. They may form the top surface of a deltaic deposit. Normally a consolidated soft silty clay, with layers of sand, gravel and peat.'

The underlying bedrock is shown to be the Mercia Mudstone Group.

The Mercia Mudstone Group is described by the BGS as comprising 'predominantly red, less commonly green-grey, mudstones and subordinate siltstones with thick halite bearing units in some basinal areas. Thin beds of gypsum/anhydrite are widespread; sandstones are also present'.

There is a fault approximately 600m north of the Site which trends roughly north to south and extends northwards away from Site.

3.2. BGS Borehole Records

The nearest non-confidential BGS borehole record is located approximately 240m east of the eastern Site boundary. Record ST38NE/11 was drilled to 30.50m and encountered topsoil to 0.5m overlying Tidal Flat Deposits which comprised layers: soft brown clay to 1.07m, soft grey-blue clay to 2.29m, brown fibrous peat to 3.96m, soft blue clay to 6.25m, a bed of red coarse grained sandstone to 6.55m, soft blue clay to 7.93m and soft sandy grey-blue clay containing pebble gravel to 9.30m depth. Underlying the Tidal Flat Deposits from 9.30m to 30.50m was the Mercia Mudstone Group, comprising firm reddish brown clay becoming firmer with depth to 30.50m.

3.3. Mining History

The Site does not lie in a coal mining reporting area, as defined by the Coal Authority[3].

Information presented within the Landmark Envirocheck Report (2021) shows two BGS recorded mineral sites located 237m south of the Site associated with the Llanwern Steelworks Slag, and 362m southeast associated with the Llanwern Works.

[3] The Coal Authority Map Viewer (arcgis.com)

Three records of extractive industries or potential excavations from 1950-1980 are recorded on the Site and fourteen recorded within 500m of the Site. Two of the records of extractive industries recorded onsite are related to pipelines and the other relates to the lime plant.

There are no other records relating to historical mining or extraction activities within 500m of the Site (**Appendix D**).

3.4. Railway and Tunnel Features

Information presented in the Landmark Envirocheck report (**Appendix D**) indicates that there are no railways, underground railways or tunnels present within 250m of the Site boundary.

However, it is known that railway sidings and tunnels were present throughout the wider Llanwern Steelworks during its history.

3.5. Radon

Information available from the 'UK Maps of Radon'[4] interactive map, shows the Site to lie within a radon affected area, where the maximum radon potential is 1-3%. As such, the site is in an area at low risk from radon, and no radon protection measures are required in the construction of the new development.

3.6. Potential for Ground Stability Hazards

The Site has been given the following BGS classifications with regards to ground stability hazards (**Appendix D**):

- Potential for Collapsible Ground Stability Hazards: **No Hazard**
- Potential for Compressible Ground Stability Hazards: **Moderate**
- Potential for Ground Dissolution Stability Hazards: **No Hazard**
- Potential for Landslide Ground Stability Hazards: **Very Low**
- Potential for Running Sand Ground Stability Hazards: **Moderate**
- Potential for Shrinking or Swelling Clay Ground Stability Hazards: **Low**

3.7. Hydrogeology

Information presented in the Landmark Envirocheck Report (**Appendix D**) indicates that the underlying Mercia Mudstone Group strata is defined as a Secondary B Aquifer and the superficial Tidal Flat Deposits are defined as Unproductive Strata.

Secondary B Aquifers are classified as comprising 'predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifer'.

[4] UKradon - UK maps of radon

Unproductive Strata classification has been given to cases where 'rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow'.

There are no records relating to groundwater abstraction licences for the Site.

The Site is not located within a groundwater Source Protection Zone and there are no reported Source Protection Zones within 500m of the Site boundary.

3.8. Hydrology

Information presented in the Landmark Envirocheck Report (**Appendix D**) indicates that the nearest surface water feature is located 9m southeast; numerous other surface water features are recorded within 500m of the Site boundary, primarily comprising reens and drains.

The Site is located within a privately drained system. Drain 4 and its associated treatment lagoon is present on the eastern boundary of the Site.

There are eleven records of surface water discharge consents within 500m of the Site, all of which are expired. The nearest surface water discharge consent was located 333m northwest of the Site, related to the former Llanwern Steelworks, from 1975 to 1986 for receiving water 'Stream Number 5'.

The Site lies within an area shown as having a Low Flood Risk from Sea according to Natural Wales Flood Risk mapping[5] from Natural Resources Wales.

3.9. Unexploded Ordnance (UXO)

Regional Unexploded Bomb Risk maps obtained from Zetica indicates that the Site is in a low risk area for UXO. The UXO report is presented in **Appendix E**.

[5] https://check-your-flood-risk.naturalresources.wales/?culture=en-GB

4.0 Regulatory Review

4.1. Authorisations and Consents

Data regarding Natural Resources Wales and Local Authority authorisations and consents has been obtained for the Site via a Landmark Envirocheck Report (**Appendix D**) commissioned for Site and the adjacent plot (Phase 5E1) in 2021. Only the information considered pertinent to the Site has been included in this report.

The Landmark Envirocheck Report contains factual information which is produced from a database of records obtained from various sources including; Local Authorities, Environment Agency (Wales Region), Natural Resources Wales and UK Health Security Agency (formerly Public Health England).

4.2. Environmental permits, incidents and registers

There are four records of Integrated Pollution Controls within 500m of the Site. The most recent of which is located 93m south of the Site relating to an ICP minor variation associated with Iron and Steel processes within the Metal Industry for Cambrian Stone Ltd, in 1999.

There is one record of prosecutions relating to authorised processes recorded within 1000m of the Site. It relates to the failure to use best practicable means to prevent emission of noxious or offensive substances, for the B O S Plant of the former Llanwern Steelworks in 1992, located 874m east of the Site and resulting in a guilty verdict.

There are nine Local Authority Pollution Prevention and Controls located within 500m of the Site. The most recent relates to the blending, packing, loading and use of bulk cement for Tarmac Limited in 2007, located 407m south of Site. There is one record of NIHHS (Not Active) located 155m northeast of the Site, named B.S.C. located on the former Llanwern Steelworks. There are no records of enforcements within 500m of the Site.

There are eleven Discharge Consents recorded within 500m of the Site. The nearest is located 333m east of the Site relating to an unspecified discharge type into receiving water ‘Stream Number 5’ for British Steel Corporation, in 1975.

4.3. Waste Management and Hazardous Substances

There is one record of a Registered Waste Treatment or Disposal Site located approximately 113m west of the Site, related to Bitmac Ltd for the authorised waste of Sulphuric Acid (Acid Tars) within the wider former Llanwern Steelworks.

There is one licensed waste management facility (Landfill Boundaries) recorded within 500m of the Site. It is categorised for industrial waste, located 127m southeast of the Site for Corus Strip Products P P C, in 1979.

A Planning Hazardous Substance Consent record is located 191m northwest of the Site, relating to British Steel for liquified extremely flammable gas and natural gas within the wider former Llanwern Steelworks. A Control of Major Accident Hazard Site (COMAH) record is located within the Site relating to British Oxygen Co Limited within the former Llanwern Steelworks. Neither of these records are currently active.

There are four contemporary trade directory entries within 500m of the Site, the closest of which is 93m south of the Site and is associated with stone products for Tarmac Western Ltd; the entry is shown as inactive. The closest active entries are both located 420m south and relate to a quarry and concrete & mortar ready mixed processes for Tarmac Trading Ltd.

4.4. Landfills and Other Waste Sites

The Landmark Envirocheck Report (2021) indicates that there are no active or historical landfills recorded on the Site or within 500m of the Site boundary.

4.5. Current Land Use: Industrial Data

Information presented in the Landmark Envirocheck Report (2021) presents 38 records of industrial data relating to manufacturing and production activities within 250m of the Site boundary, all relating to tanks or industrial features associated with the historical Spencer Steelworks, Tarmac Western Ltd or the Celtic Business Park.

4.6. Designated Environmentally Sensitive Areas

Reference to the Natural England 'MAGIC' maps website[6] and the Landmark Envirocheck Report (2021) indicates that there is a Site of Special Scientific Interest (SSSI) located 244m southwest relating to the Gwent Levels – Nash and Goldcliff.

No further designated environmentally sensitive sites are recorded within 500m of the Site.

4.7. Archaeology

A preliminary search of the Historic Wales[7] archaeological database (accessed August 2024) indicates no records within the Site boundary.

4.8. Radiation

The historical Blueprints and Historical Site Layout Plan, as shown on RLL Drawings 18669-RLL-22-XX-RP-O-0300 and 18669-RLL-22-XX-RP-O-0299, and the original Operational Site Layout Drawing (ref. 839181, dated December 1999) (**Appendix A**), show a radiation store was present in the approximate centre of the Site.

[6] https://magic.defra.gov.uk/magicmap.aspx (Accessed August 2024)
[7] https://historic-wales-rcahmw.hub.arcgis.com/ (Accessed August 2024)

Potential for radiation contamination may be present associated with the Made Ground surrounding the location of the demolished radiation store. This should be investigated further as part of the ground investigation.

5.0 Preliminary Conceptual Site Model

5.1. Preliminary Risk Assessment

This section provides a qualitative risk assessment of the risks posed from potential on and off-site contamination sources, identified by the desk-based information presented in the previous sections.

The conceptual model below has been developed based on the commonly adopted source-pathway-receptor model as recommended within Land Contamination Risk Management (LCRM).

5.2. Potential Sources of Soil Contamination related to the Sites historical past and current use

5.2.1. On-site

The Site has historically been occupied by the Llanwern Steelworks and included infrastructure such as the Lime Plant, kilns, hoppers, conveyors, pipelines, substation, railway sidings, water tower, Drivehouse, hydrogen production plant and radioactive store. Contaminants associated with the steelworks are likely to be widespread throughout the Made Ground, however elevated concentrations and specific contaminant types are anticipated to be localised around former infrastructure.

Potential contaminant sources are summarised in the following table.

Summary of Potential On Site Sources of Contamination		
Source	Site Area	Key Contaminants
Historical Steelworks infrastructure	Whole Site	Heavy metals, asbestos, PAHs, TPHs.
Made Ground	Whole Site	Heavy metals, asbestos, PAHs, TPHs.
		VOCs and SVOCs
		Decaying organic constituents with potential to generate ground gas (carbon dioxide and methane).
	Isolated locations surrounding historical radioactive store	Potential for radioactive contamination associated with the historical radioactive store.
Natural Strata	Whole Site	Potential for ground gas (carbon dioxide and methane) from organic materials in the Tidal Flat Deposits. Potential for sulphates and pyrites in the underlying Tidal Flat Deposits and Mercia Mudstone Group.

Asbestos may be present where former above ground structures have historically been demolished.

5.2.2. Off-site

The surrounding site on all sides historically formed part of the Llanwern Steelworks. These features are likely to present similar sources of contaminants as described in the above table.

5.3. Ground Gas / Vapour

There are no records of active or historic landfill sites situated within 500m of the Site. The Site is underlain by Tidal Flat Deposits, which comprises discontinuous pockets or layers of peat, which may give rise to methane. The Site is underlain by Made Ground which may give rise to carbon dioxide, methane and vapours.

One potential infilled feature has been identified within the Site and three potential infilled features have been identified within 500m of the Site. However, these have not been recorded as landfills but rather as potential pond, marsh, river stream or docks and therefore are unlikely to present a significant source of gas.

The Site is not shown on the UK Mining Remediation Authority Map[8] to lie within an active or historic coal mining area.

5.4. Potential Pathways

With regard to the assessment of risk to human health, the following pathways are considered to be potential exposure routes based on residential with plant uptake end-use, in accordance with the CLEA Documentation:

- Dermal contact.
- Direct ingestion of soil.
- Inhalation and ingestion of soil dust.
- Inhalation of gases / vapours.
- Ingestion of contaminated water via plastic pipes.

With regard to Controlled Waters, the following pathways are considered applicable:

- Downward infiltration through soils
- Lateral migration through soils towards the nearest surface feature Newly created preferential pathways associated with the redevelopment of the site e.g. deep boreholes/piles/sewers.

[8] Mining Remediation Authority Map Viewer (Accessed 16/07/2026)

5.5. Potential Receptors

The following are considered to be potential receptors for contamination:

Receptor		Additional information
Human Health	Site end users Construction/maintenance workers	A female child will be regarded as the critical receptor.
Controlled Waters	Unproductive Strata – superficial. Secondary B Aquifer – bedrock.	Low vulnerability, Secondary Aquifer.
	Kings Wall Reen, East Lake and associated development drainage network within 500m.	
Other	Neighbouring buildings	Residential properties under construction to the west of the Site and the Indurent Business Park, Newport located to the east.
	Underground structures	Underground structures such as concrete piles.
	Flora and fauna	

5.6. Pollutant Linkages

Based on the information above, the following potential pollutant linkages are considered applicable to the site. The risk classification has been qualitatively derived in accordance with LCRM. The terminology used is taken from CIRIA C552, and a summary of the principal terms are provided in **Appendix G**.

Pollutant Linkage	Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk	Comment
1	Contaminated Soils	Ingestion of soil, dermal contact, inhalation of dust	Site end users Construction workers; maintenance workers	Likely	Medium	Moderate	Given the Site's history, it is likely that the Made Ground soils contain elevated chemical concentrations harmful to human health, therefore it is plausible that future site users and neighbours could be exposed to these soils. An intrusive ground investigation including chemical analysis of the Made Ground is required, including assessment to establish the level of risk and determine appropriate mitigation.
2		Inhalation of soil dust	Members of the public adjacent to the site during construction	Likely	Medium	Moderate	
3	Contaminated Soils and Groundwater	Leaching and groundwater flow to surface water	Kings Wall Reen and East Lake and associated development drainage network within 500m.	Likely	Medium	Moderate	It is likely that potential contaminants present within the Made Ground may leach into the underlying perched water/ groundwater and migrate via groundwater pathways to nearby surface water receptors, as well as the associated drainage infrastructure. There is also potential for contaminants to migrate vertically into the Secondary B Aquifer.
4		Downward migration into groundwater.	Secondary B Aquifer. Unproductive Strata.	Likely	Medium	Moderate	

Pollutant Linkage	Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk	Comment
5		Leaching of sulphate and corrosive contaminants	Buried concrete structures and services	Likely	Medium	Moderate	An intrusive ground investigation including soil chemical analysis is required to determine the contaminants present, assess the risk and determine the appropriate mitigation.
6	Contaminated Water Supplies	Ingestion of water, Migration of organic contaminants via plastic pipes	Humans – Site End Users	Likely	Medium	Moderate	It is possible that contaminants in the Made Ground have potential to impact water supplies, where plastic pipework is present. Certain organic contaminants may permeate the pipe material and affect the water quality. An intrusive ground investigation, including soil chemical analysis is required to determine the contaminants present in the Made Ground, assess the level of risk and determine appropriate mitigation measures.
7	Ground gas from Made Ground and natural soils	Migration of asphyxiant and explosive gas into confined spaces	Site end users, construction/ maintenance workers in trenches.	Likely	Severe	High	Made Ground is present on the site which potentially contains decaying organic components generating ground gas. In addition, the Tidal Flat Deposits are expected to contain pockets of peat which may also generate gas. A programme of ground gas monitoring should be undertaken to assess the Site gas characteristic situation and determine the appropriate gas protection measures.

Pollutant Linkage	Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk	Comment
8	Potential for ammoniacal nitrogen in the underlying natural soils.	Leaching and groundwater flow to surface water.	Kings Wall Reen and East Lake and associated development drainage network within 500m.	Unlikely	Mild to moderate	Low	The presence of discontinuous layers of peat within the Tidal Flat Deposits may generate higher concentrations of ammoniacal nitrogen. However, these are naturally occurring deposits overlying strata classified as Secondary B Aquifer/ Unproductive Strata and groundwater vulnerability is limited. Given the natural origin of the soils and the proposed works are not anticipated to significantly disturb the underlying natural deposits, the potential for adverse effects is considered low. No significant pollutant linkage is considered likely under the proposed site use.
9	Potential sulphate generation from pyrites within the Mercia Mudstone.	Leaching of sulphate into groundwater and soils.	Buried concrete structures and services	Low likelihood to likely	Moderate	Low to Moderate	The Mercia Mudstone may contain pyrite which can result in the leaching of sulphates through oxidation. Sulphate laboratory testing should be undertaken and classification in accordance with BRE Special Digest 1 to determine the concrete class required for future structures.
10	Radioactive contamination from made ground	Direct contact with contaminated soils.	Site end users, construction/ maintenance workers.	Low to moderate (subject to verification through radiological survey)	Severe	Moderate	Given the Site's historical inclusion of a radioactive store, there is a low to moderate probability that radioactive contamination is present in the vicinity of the radioactive store. A radiological walkover survey should be conducted in the areas surrounding the historical radiation
11		Ingestion/inhalation of soil and dust, external radiation exposure.	Site end users, construction/ maintenance workers.				

Pollutant Linkage	Source	Pathway	Receptor	Probability	Consequence	Preliminary Risk	Comment
12		Migration via groundwater.	Secondary B Aquifer. Unproductive Strata.				store to determine whether background (baseline) levels of radiation are exceeded and to identify the appropriate mitigation measures.

6.0 Ground Investigations

6.1. Existing Reports

Three historical ground investigations have been undertaken at the Site, two by Atkins in 2014 and 2016 and one by RLE 2020-2021, all covering the wider Llanwern development. As part of this ground investigation, ten exploratory holes including boreholes and trial pits (MSY011, MSY012, MSY013, MSY014, MSY015, CWCP18, TP-AK32, TP-AL33, TP-AV28 and TP-AV29) were drilled/ excavated within the Site boundary. No other information aside from the borehole logs were provided from the Atkins 2014 and 2016 ground investigations.

The following table provides a summary of the exploratory holes that were located within the Site boundary.

Summary of Historical Exploratory Holes within the Site Boundary	
Report	**Exploratory Holes**
Atkins (2014)	Five Trial Pits.
Atkins (2016)	Two Cable Percussion Boreholes and two Window Sample Boreholes.
RLL (2020/21)	Eighty-five Trial Pits.

RLL Drawing 18669-RLL-23-XX-DR-O-0580-P02, presented in **Appendix A,** shows the location of the exploratory holes.

The historical logs within the Site boundary are presented in **Appendix F**; logs for locations CWCP17 (Atkins) and AU28 (RLL) could not be located.

6.2. Encountered Ground Conditions

The Site was generally found to be underlain by Made Ground overlying superficial deposits, reported as Tidal Flat Deposits. The solid geology consists of the Mercia Mudstone Group, and this was encountered in one location (CWCP18).

6.2.1. General Made Ground

Made Ground was encountered within all 92 exploratory holes from ground level, with a range in thickness between 0.20m to 3.00m, and is generally heterogeneous and comprises:

- Dark brown/ brown/ black occasionally silty sandy gravelly CLAY;
- Soft to firm dark brown gravelly CLAY;
- Dark brown/ brown/ black/ grey/ bluish grey occasionally clayey sandy GRAVEL;
- Black grey gravelly SAND;
- Orange brown/ black/ brown gravelly clayey SAND;

- Grey/ red occasionally sandy GRAVEL of slag;
- Loose red GRAVEL;
- White CLAY (Lime);
- Dark brown clayey GRAVEL;
- Grey/ black occasionally sandy cobbly GRAVEL;
- Brown silty GRAVEL;
- Light brown and white sandy very gravelly CLAY; and
- Brown and white very sandy clayey GRAVEL.

Gravel and cobble components comprised fine to coarse, angular to subrounded red brick, concrete, clinker, coal, limestone, slag, mudstone, quartz, shale, flint and ash; in addition to fragments of plastic, metal fragments, rebar, pig iron, wood and rootlets.

Seven locations (CWWS18, AL33, AM32, AM34, AN32, AN34 and AK33) refused at depths of 0.60mbgl and 1.50mbgl. Refusal occurred within fused slag layers or due to large cobbles/ boulders.

6.2.2. Superficial Deposits

Tidal Flat Deposits were encountered beneath the Made Ground in 27 locations. The top of the strata was encountered from depths of 1.10mbgl and 3.00mbgl. The base of the strata was encountered in one location (CWCP18) at a depth of 10.60mbgl.

The Tidal Flat Deposits are heterogeneous and generally comprise:

- Firm bluish grey silty CLAY;
- Soft brownish grey silty CLAY;
- Very soft dark grey fibrous PEAT;
- Very soft grey clayey SILT;
- Soft grey/ bluish grey CLAY; and
- Soft to firm bluish grey and black CLAY.

6.2.3. Solid Geology

The Mercia Mudstone Group was encountered at one location (CWCP18) at 10.60mbgl. The base of the stratum was not encountered but it was recorded to a maximum depth of 12.35mbgl. The Mercia Mudstone was described as very stiff reddish brown silty CLAY (Grade IVb).

6.2.4. Perched Water

Perched water was encountered in 14 locations, typically within the Made Ground or towards the base of the Made Ground perched on top of the Tidal Flat Deposits at depths between 0.50m to 1.50m bgl.

6.2.5. Groundwater

Groundwater was encountered twice within one location (CWCP18) within the very soft fibrous peat of the Tidal Flat Deposits at 6.00mbgl rising to 5.00mbgl, and again

within the very stiff silty clay of the Mercia Mudstone Group at 12.10mbgl rising to 11.00mbgl.

6.2.6. Encountered Buried Obstructions or Services

Buried obstructions or services were encountered in 3 exploratory locations as detailed in the following table.

Encountered Buried Obstructions			
Borehole	**Depth (m)**	**Strata***	**Remarks**
AV28	0.80 – 2.60**	MG	Concrete pile
AV29	0.70 – 2.20**	MG	Concrete pile
AK34	0.80 – 1.80**	MG	Concrete pile with rebar

Notes: *MG= Made Ground **base of obstruction not encountered.

6.2.7. Visual/ Olfactory Evidence of Contamination

During the intrusive investigations, visual or olfactory evidence of contamination was not encountered.

6.2.8. Instability

Stability was recorded within 81 of the 92 exploratory holes; 79 locations were recorded as being stable and 2 were recorded as unstable due to collapsing sides in both locations.

6.3. Gas Screening

No gas monitoring was undertaken during the previous ground investigations. A programme of shallow gas monitoring is required following turnover and earthworks reengineering.

A site-specific ground gas assessment is recommended following the completion of the earthworks.

7.0 Radiological Walkover Survey

A radiological walkover survey was undertaken by RLL in September 2022 to assess the presence of potential radioactive contamination associated with the historical radioactive store, highlighted during the Preliminary Risk Assessment.

The radiological survey was undertaken using a Series 900 Mini-Monitor with a 44B scintillation detector. The instrument measures ambient gamma radiation to record areas of elevated radioactivity relative to background conditions.

The radiological survey results are presented and discussed within the RLL Phase 5E2 Radiological Walkover Technical Note (ref. 18669-RLL-23-XX-RP-O-00400-P01), available in **Appendix I**. The note found that the area surrounding the historical radioactive store did not present elevated radiation above site specific background radiation levels and no further remedial requirements are considered necessary.

8.0 Chemical Testing

8.1. Risks to Human Health

8.1.1. Methodology

To assess the risk posed to the health of site end users, the concentrations of contaminants recorded in soils have been compared to appropriate Site Assessment Criteria (SAC). These have been derived using the Contaminated Land Exposure Assessment Model (CLEA). SACs used in this generic quantitative risk assessment, include:

- Defra Category 4 Screening Levels (C4SLs) (Defra, 2014); and
- Land Quality Management & Chartered Institute of Environmental Health (LQM & CIEH, 2015) Suitable for use levels (S4ULs).

Where C4SL or S4UL are not available for a contaminant or are not considered appropriate for the risk assessment reference has been made to the Environment Agency Soil Guideline Values (SGV), the LQM/CIEH Generic Assessment Criteria (GAC) and the Environmental Industries Commission GAC (EIC GAC).

The C4SL and EA SGV have been derived based on the CLEA default value for Soil Organic Matter (SOM) content of 6% and a sandy loam soil type. The LQM/CIEH S4UL and GAC and the EIC GAC are based on 1%, 2.5% and 6% SOM content and a sandy loam soil type.

The Site has been assessed based on a residential end use with plant uptake as defined in the Environment Agency (EA) CLEA model v1.071 'Updated technical background to the CLEA model Science Report – SC050021/SR3'.

8.1.2. Results

148 soil samples were collected during the RLL 2020/ 2021 ground investigation with contamination testing taken from the Made Ground. No samples were taken during the Atkins 2014 and Atkins 2016 ground investigations.

Samples were tested for heavy metals, polycyclic aromatic hydrocarbons (PAH), total petroleum hydrocarbon (TPH-CWG), gasoline range organics (GROs), BTEX, pH, soil organic matter (SOM), cyanide, phenols, ammoniacal nitrogen and select samples were also tested for asbestos.

The samples are conservatively assessed against LQM/ CIEH 2024 S4ULs (Suitable for Use Levels) for a residential end use with plant uptake (1% SOM). A summary of exceedances is presented in the following table, and the chemical analysis results are presented in full in **Appendix G**.

Summary of Exceedances of S4ULs Residential with Plant Uptake Criteria.			
Contaminant	**Screening Criteria Value (mg/kg)**	**No. of Exceedances**	**Exceedance Concentration Range (mg/kg)**
Arsenic	37	7	41 – 280
Nickel	130	1	270

Summary of Exceedances of S4ULs Residential with Plant Uptake Criteria.			
Contaminant	**Screening Criteria Value (mg/kg)**	**No. of Exceedances**	**Exceedance Concentration Range (mg/kg)**
Lead	200	5	242 – 1400
Vanadium	140	3	571 – 660
Zinc	3700	1	5700
Aliphatic TPH >C8-C10	27	2	84 – 330
Aliphatic TPH >C10-C12	130	2	400 – 1300
Aliphatic TPH >C12-C16	1100	2	1600 – 4900
Aromatic TPH >C8-C10	34	1	240
Aromatic TPH >C10-C12	74	2	150– 710
Aromatic TPH >C12-C16	140	2	840 – 3200
Aromatic TPH >C16-C21	260	2	780 – 3100
Aromatic TPH >C21-C35	1100	2	2600 – 4400
Aromatic TPH >C35-C44	1100	1	2000
Benzene	0.087	14	<0.18
Phenanthrene	95	1	110
Benzo[a]anthracene	7.2	7	7.30 – 20.00
Chrysene	15	2	18 – 21
Benzo[b]fluoranthene	2.6	27	3 – 33
Benzo[a]pyrene	2.2	26	2.30 – 26.00
Dibenz(a,h)Anthracene	0.24	27	0.258 – 3.900

The exceedance locations are shown on RLL Drawing 18669-RLL-26-XX-DR-O-0897-P01 (**Appendix A**).

14 of 148 samples were shown to exceed the screening criteria for benzene. It should be noted that no samples had concentrations above the limit of detection for benzene. The detection limit for benzene tested listed by the laboratory for 14 samples as 180µg/kg (0.18mg/kg) which 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. The true concentration is likely to be lower than this value.

No samples were collected from the natural ground (Tidal Flat Deposits) as part of the RLL 2020/ 2021 ground investigation.

8.1.3. Asbestos

Asbestos was identified in 4 samples from the 83 analysed; a summary of the asbestos identified is given in the below table.

Summary of Asbestos Identified within the Site		
Location (Depth in m bgl)	**Asbestos Type**	**Quantification (%)**
AT36-2 (1.80)	Chrysotile (Fibres/ Clumps)	0.005
AO36-2 (1.80)	Chrysotile (Bitumen)	0.063
AO32-1 (2.00)	Amosite (Fibres/ Clumps)	0.005
AW29-1 (0.60)	Chrysotile	<0.001

Asbestos was identified in four samples; all positive samples were quantified to ascertain the weight for weigh concentration of asbestos in soil and returned results ranging between <0.001% to 0.063%.

The Institute of Occupational Medicine (IOM) risk assessment report for the reuse of soils containing asbestos at Llanwern (Ref. 401134-IOM-14-XX-RP-Z-0001) and has been agreed with Natural Resources Wales, states the following:

- Within the clean cover system, a minimum of 0.6m of clean soil will be placed across the Llanwern site and an asbestos content of <0.001% is permitted within the subsoil component of the clean cover; topsoil will be imported to Site and contain no trace asbestos.
- Beneath the cover system, soil will be screened and, if asbestos contamination is less than 0.02% (200PPM) in the soil, that soil may be below the cover system of residential areas.

8.1.4. Groundwater

No samples of perched water were taken during the previous ground investigations.

Historical investigations undertaken by Atkins across the wider development have identified elevated concentrations of contaminants associated with the Site's former usage that may present a risk to Controlled Waters.

Further assessment of the risk posed by the Site as part of the wider development has been completed via preparation of a Controlled Waters Detailed Quantitative Risk Assessment (Ref. 18669-RLE-19-RP-O-0006) for the wider development and a phase specific addendum to this (Ref. 18669-RLL-24-XX-RP-O-0635-P01).

Due to the history of the Site, it is anticipated that further remedial works including turnover of the Made Ground will be undertaken with post remedial monitoring of water and gas following the completion of the earthworks.

9.0 Conceptual Site Model (CSM)

This section provides a qualitative assessment of the risk posed from potential on and off-site contamination sources identified from the information presented in the previous sections. The CSM considers the findings of all ground investigations that have been undertaken at the Site.

The assessment carried out assumes that the Site will be redeveloped for a residential with plant uptake end-use, as the most sensitive of the proposed uses. Should the end use be altered, potential pathways and receptors should be re-assessed.

The conceptual site model below has been developed based on the commonly adopted source-pathway-receptor model as recommended within the Environment Agency Land Contamination Risk Management guidance and the Welsh Government's Contaminated Land Statutory Guidance for Wales 2012, and the Welsh Government, Natural Resources Wales & Welsh Government's Development of Land Affected by Contamination: A Guide for Developers (2017).

9.1. Potential Pollutant Linkages

9.1.1. Sources

The Site makes up part of the former Llanwern Steelworks; the Site historically comprised a travelling boom in the north; a drive house, numerous pipelines and a water tower on the eastern side; lime kilns, a screen house, several hoppers, conveyors and lime bunkers in the central part of the site; and a radioactive store and an air products hydrogen plant in the south.

Chemical analysis has identified concentrations higher than the human health screening criteria for arsenic, nickel, lead, vanadium, zinc, aliphatic TPH >C8-C10, aliphatic TPH >C10-C12, aliphatic TPH >C12-C16, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, aromatic TPH >C21-C35, aromatic TPH >C35-C44, benzene, phenanthrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[a]pyrene and dibenz(a,h)anthracene. Asbestos was identified within 4 of the 83 soil samples tested in the form of loose fibres or bitumen at concentrations of <0.001% - 0.063% w/w.

9.2. Potential Receptors

The following receptors (current and proposed) have been identified at the Site. Given the absence of significant ecological designations in the vicinity of the Site, ecological receptors are not considered below.

Humans:

- Construction workers and maintenance workers; and
- Residents on and off-site (current and future).

Controlled Waters:

- Mercia Mudstone Group (Secondary B Aquifer) and Tidal Flat Deposits (Secondary [Undifferentiated] Aquifer); and
- Kings Wall Reen, East Lake and associated development drainage network within 500m.

Property:

- Existing and proposed buildings and services on and immediately surrounding the Site; and
- Proposed infrastructure on the Site.

9.2.1. Potential Pathways

Human Health

There is the potential for exposure of site end users to contaminants in soils via the following pathways, based on a residential with plant uptake end use (Environment Agency CLEA land use scenario):

- Direct soil and dust ingestion;
- Dermal contact with soil directly and indoor dust;
- Plant uptake followed by consumption of homegrown produce;
- Inhalation of vapours;
- Inhalation of dust; and
- Inhalation of gases.

Due to the levels of contamination encountered it is recommended that appropriate risk assessments and method statements are prepared and safety measures (use of PPE/ hygiene rules) implemented in order to provide adequate protection for construction workers.

Imported subsoil and/ or topsoil will be required to form part of the cover system. Materials that are required to be imported to Site, will have to be assessed and validated in line with the agreed import criteria detailed in the remediation strategy and site-specific Materials Management Plan (MMP).

Investigation and assessment of gases and vapours have been excluded in this Desk Study and Phase 2 report and will be addressed post-remediation.

Radon protection measures are not required.

Controlled Waters

It is considered that due to the low permeability nature of the underlying Tidal Flat Deposits, there is no feasible pathway for vertical migration of contaminants into the underlying Mercia Mudstone Aquifer.

Currently Monks Ditch crosses the wider development within a concrete channel and no connection with the private drainage system currently exists. It is proposed that the future surface water network of reens and lakes will discharge via a pumping

system into Monk's Ditch. This on-site surface water system will discharge, via a permit, into Monks Ditch once the specified quality criteria are met and the application to connect the system is approved.

Monks Ditch is not currently a receptor (it is understood to be hydraulically isolated as it flows between the Glan Llyn development and the business park the east, within a concrete channel), although it could potentially be a future receptor if surface water discharge is permitted into the Monks Ditch.

With regard to Controlled Waters, the following pathways are considered applicable to the Site, following completion of the development and once relevant approvals have been granted to allow discharge into Monks Ditch:

- Leaching of soil-borne contamination in Made Ground and subsequent lateral migration through permeable pathways in Made Ground to Monks' Ditch via onsite reens.

As such, a Site Specific Detailed Controlled Waters Risk Assessment (Ref. 18669-RLL-26-XX-RP-O-0865) has been undertaken for the Site and should be read in conjunction with this report.

Structures

Concrete classification testing has not been undertaken. A Design Sulphate (DS) class and Aggressive Chemical Environment for Concrete (ACEC) class should be derived for the Site in accordance with the recommendations given within BRE SD1 and based on pH and sulphate testing.

A site-specific ground gas assessment is recommended following the earthworks.

9.2.2. Preliminary Remediation Assessment

The Site has previously undergone various phases of ground investigation.

Based on the ground investigations to date, it is recommended that the provision of clean cover is likely to make the Site suitable for human health.

In terms of the risk to controlled waters some material is anticipated to be removed to break the linkage to the identified receptor (private reen network). To do this the Made Ground will be tested, re-assessed and where the soil does not meet the reuse criteria it will be excavated, removed, and replaced with suitable fill that meets the criteria. Prior to filling, excavations of unsuitable material shall be validated to demonstrate compliance with the Remediation Strategy.

The installation and validation of gas and vapour mitigation measures may be required following completion of the post-earthworks ground gas risk assessment.

9.2.3. Proposed Sequence of Mitigation

The proposed remedial approach is to remove unsuitable material based on the grid of chemical testing and turnover the Made Ground to the Tidal Flat Deposits, to

depths between 0.60m to 3.60mdgl (approximately). The Made Ground turnover and re-engineering (including compaction) will remove obstructions and reduce the hydrological conductivity of this material. Based on the results of chemical testing, the Made Ground is not suitable for reuse at shallow depths within residential plots but is likely to be suitable for use as part of the reengineered formation beneath 600mm of clean cover.

The introduction of buildings and hardstanding with suitable construction materials to break the pathway with underlying Made Ground shall intercept rainwater and subsequently reducing infiltration to Controlled Waters (private reen network).

To break the identified contamination linkages, the following sequence of mitigation measures are required:

- Identify, remove and validate the removal of gross contamination and potential obstructions on a grid square basis, and subsequent validation testing and reporting;
- Excavation of Made Ground to the Tidal Flat Deposits and removal of unsuitable material and buried obstructions to facilitate reengineering and reuse of the Made Ground;
- Off-site disposal of impacted soils that do not meet the reuse criteria (where required);
- Reengineering of the Made Ground in accordance with the approved Remediation Strategy and Earthworks Specification to an appropriate specification to achieve the required formation level;
- Chemical and geotechnical validation of the placement of material following turnover;
- Site-specific geotechnical assessment and validation relating to the proposed development;
- Installation of a 600mm clean cover system, suitable for a residential with plant uptake end use, will be required in areas of residential gardens and landscaping;
- Consultation with the water supply company in relation to the potential use of barrier pipe;
- Preparation of a Piling Risk Assessment;
- With respect to asbestos, a minimum of 600mm of clean soil (in accordance with Llanwern Asbestos Risk Assessment prepared by IOM) will be placed across the Llanwern site. Made Ground material will be screened and, if asbestos contamination is less than 0.02% (200PPM) then it may be used in residential areas below the clean cover. The materials used in the preparation of the site will be recorded in a validation report assessing compliance with the approved criteria;
- A Design Sulphate (DS) class and Aggressive Chemical Environment for Concrete (ACEC) class should be derived for the Site in accordance with the recommendations given within BRE SD1 and based on pH and sulphate testing; and

- A programme of shallow gas monitoring and vapour assessment is recommended following the turnover and reengineering of the Made Ground to determine whether protective measures are needed with proposed buildings.

The risk to Controlled Waters has been assessed in both the sitewide CWRA (ref. 18669-RLE-19-RP-O-0006) and phase specific CWRA (ref. 18669-RLL-24-XX-RP-O-0635-P01) to further determine whether additional works are required to protect Controlled Waters receptors post-development. This, along with a formal Remediation Strategy should be agreed with Natural Resources Wales (NRW) and Local Authority (LA).

10.0 Geotechnical Testing

10.1. Sampling and Testing

Geotechnical sampling was undertaken by an RLL Engineer during the ground investigation.

Samples collected on Site were sent for geotechnical laboratory testing, which were undertaken in accordance with BS1377:1990. Laboratory testing was undertaken by Celtest and included the following:

Summary of Geotechnical Testing Undertaken on Samples	
Test	**Number of Samples Tested**
Water Content	90
Particle Size Distribution by Wet Sieve	90
Compaction Using 4.5kg rammer	83
Total Expansion BRE Tests	45

The above testing provided results to show the principal geotechnical properties of the major geological units identified during the ground investigation. A summary of the geotechnical laboratory results is presented in the following sections, and the laboratory data is included within **Appendix H**.

10.2. Classification Testing

10.2.1. Natural Moisture Content

83 compaction tests (4.5kg rammer) were undertaken on samples of Made Ground between 0.20m and 2.20m and recorded an optimum moisture content for the Made Ground of 7.7% to 36%.

Water content tests were undertaken on 90 samples and recorded water content between 1.5% and 40.9%.

10.2.2. Material Grading and Classification

Particle size distribution tests were undertaken on 90 samples of the Made Ground on Site. The results of the particle size distribution tests on the Made Ground indicate the material can be generally described as a silty sandy GRAVEL with occasional cobbles, falling into Class 1A & 1B – General Granular Fill. This grading of material, when compacted/ reengineered, is likely to have limited permeability (approximately 10-6 or 10-7), classed as poor draining soils and therefore inhibiting the downward migration of infiltrated rainwater into the Made Ground.

10.3. BRE Total Expansion Tests

45 samples were scheduled for testing in accordance with BRE 481 Part B - Appendix B to determine the expansion of steel slag (over 28 days at 80°C), between 0.20m and 2.20m, and recorded a total expansion of -2.43% to 4.7%. It is worth

noting that the BRE test is a conservative test crushing material >20mm and placing it in a bath of water at 80°C for 28 days.

According to the RLL Technical Note (ref. 17480-RLE-18-XX-RP-O-001, dated March 2018) Geotechnical Guidance for Reuse of Made Ground Containing Slag, the guideline average expansion value considered to be acceptable is 2.5%.

Of the 45 samples tested, the mean value recorded was 0.4%; and three samples (AL32-1 (0.5m), AS36-1 (1.0m) and AV34-2 (1.8m)) produced results over 2.5%, with expansion values of 3.8% to 4.7%.

A full copy of the results are included in **Appendix H**.

11.0 Conclusions and Recommendations

11.1. Conclusion

The Site is located within the Glan Llyn development at the former Llanwern Steelworks, approximately 5.8km to the west of Newport City Centre at approximate National Grid Reference 336520E, 186397N. The Site covers an area of approximately 7.0ha and is located on the southern boundary on the southeast corner of the wider Glan Llyn development. It is understood that the Site is proposed to be redeveloped for a residential end use.

Historically, the Site exclusively comprised agricultural land segregated into part five fields by hedgerows and drains, until 1967 when the Site formed part of the Llanwern Steelworks. The Site housed various infrastructure associated with the former steelworks including a travelling boom which ran along the northern side of the Site, as well as a drive house, numerous pipelines and a water tower on the eastern side of the Site. The centre of the Site comprised lime kilns, screen house, hoppers, conveyors, and lime bunkers; while a radioactive store and air products hydrogen plant occupied the southern side of the Site. The Site was partially demolished by 2006 with the demolition completed to slab level by 2016.

Three previous ground investigations were undertaken by Atkins in 2014 and 2016, and RLL in 2020/2021, as part of ground investigations on the wider Llanwern site. The Site was generally found to be underlain by Made Ground overlying Tidal Flat Deposits, underlain by bedrock of the Mercia Mudstone Group. Tidal Flat Deposits were encountered in seven boreholes underlying the Made Ground from 1.10m to 10.60m. The bedrock of the Mercia Mudstone Group was encountered in one location (CWCP18) underlying the Tidal Flat Deposits from 10.60m; it was described as being very stiff reddish brown silty CLAY.

The 2021 RLL ground investigation comprised 85 trial pits within Phase 5E2. General Made Ground was encountered within all exploratory holes from ground level to depths of between 0.30m to 3.00m. Superficial deposits of Tidal Flat Deposits were encountered underlying the Made Ground in 17 locations from depths of 1.70m to 3.10m. Regional groundwater and perched water were not encountered in any of the 85 locations.

Oily sheens or hydrocarbon odours were not encountered during the previous ground investigations. Buried obstructions concrete, rebar or asphalt were not encountered in any of the locations; however historical piles were encountered on three occasions and seven refusals occurred within fused slag layers or due to large cobbles/ boulders. Fragments of concrete, rebar, metal, brick, timber, pig iron and fused slag was recovered as gravel within the Made Ground.

148 soil samples were collected and scheduled for analysis within the Made Ground. Chemical analysis has identified concentrations higher than the S4ULs for a residential end use with plant uptake (1% SOM) for arsenic, nickel, lead, vanadium, zinc, aliphatic TPH >C8-C10, aliphatic TPH >C10-C12, aliphatic TPH >C12-C16, aromatic TPH >C8-C10, aromatic TPH >C10-C12, aromatic TPH >C12-C16, aromatic TPH >C16-C21, aromatic TPH >C21-C35, aromatic TPH >C35-C44,

benzene, phenanthrene, benzo[a]anthracene, chrysene, benzo[b]fluoranthene, benzo[a]pyrene and dibenz(a,h)anthracene.

Soils containing asbestos were recorded in four locations with concentrations of between <0.001% and 0.063% w/w. In accordance with the IOM report, soils with concentrations below 0.02% (200PPM) are considered suitable for reuse in residential areas.

No water sampling has been undertaken within the Site during the previous ground investigations. Ground investigations undertaken across the wider development have identified elevated concentrations of contaminants that may potentially present a risk to Controlled Waters, this has been assessed in the DQRA.

A Site-specific ground gas and vapour assessment is recommended following the earthworks, comprising a programme of shallow ground gas monitoring and vapour assessment following the turnover of the Made Ground to natural geology and reengineering of the site won Made Ground to formation levels. Radon protection measures are not required.

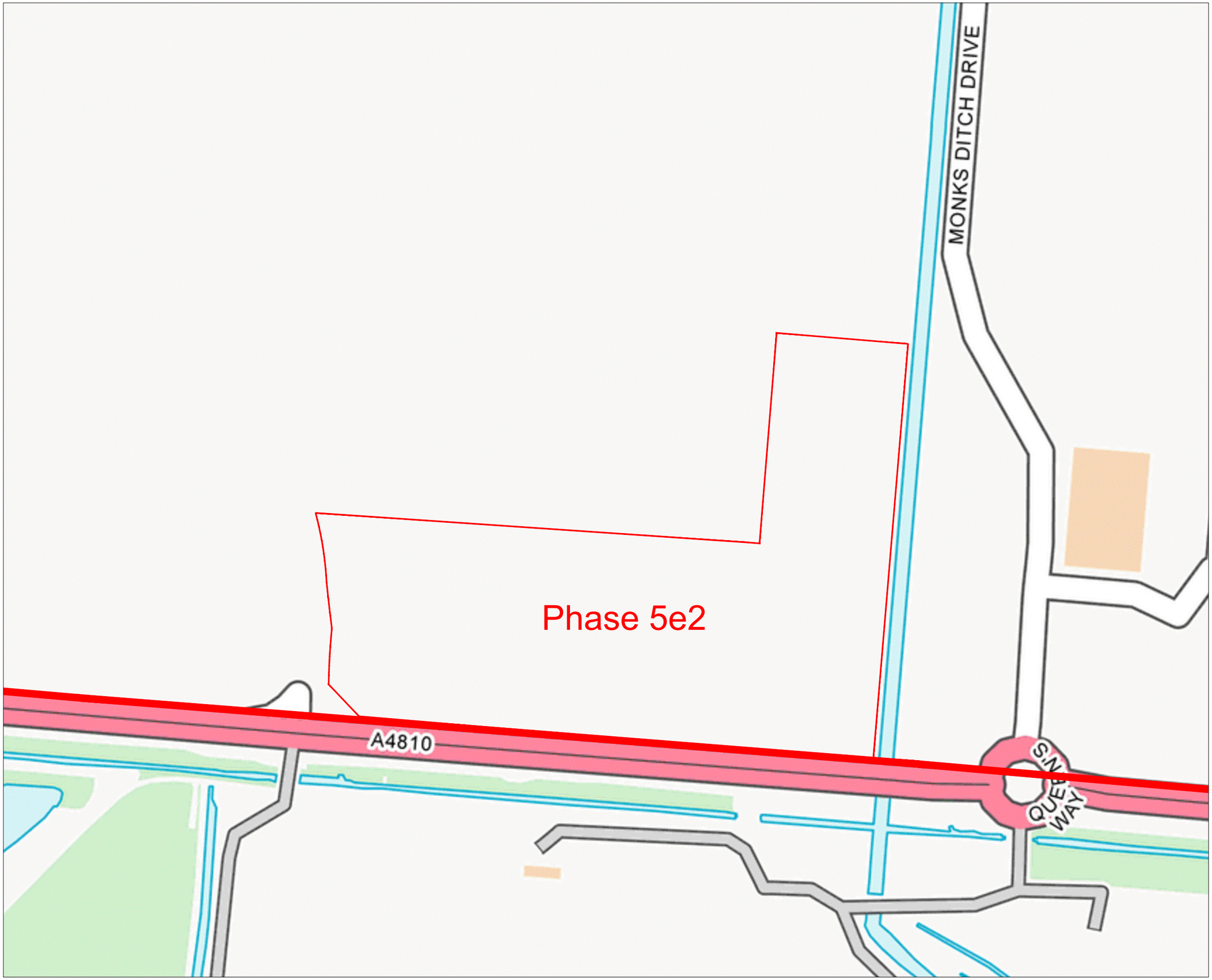
11.2. Recommendations

Following completion of the ground investigation the RLL recommends the following is completed:

- Removal of identified hotspot contamination on a grid square basis, and subsequent validation testing and reporting.
- Turnover of the Made Ground to natural geology with removal of obstructions.
- Reengineering of materials in accordance with the approved Remediation Strategy and Earthworks Specification to an appropriate specification to achieve the required formation level.
- Chemical and geotechnical validation of the placement of material following turnover.
- A programme of shallow gas monitoring and vapour assessment is recommended following the earthworks to turnover and reengineer the Site.
- Concrete classification testing should be undertaken in accordance with BRE Special Digest 1.
- Phase-specific geotechnical assessments and validation relating to the proposed development.
- Construction of buildings and hardstanding with suitable construction materials to break the pathway with underlying Made Ground, to intercept rainwater and to reduce infiltration.
- A 600mm clean cover system, suitable for a residential with plant uptake end use, will be required in areas of residential gardens and landscaping.
- Consultation with the water supply company in relation to the potential use of barrier pipe.
- Preparation of a Piling Risk Assessment;
- Preparation of an MMP to facilitate the reuse of excavated materials and import of soil for use in the cover system.

Appendices

Appendix A
Drawings and Plans



GENERAL NOTES

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KEY:

Approximate Site Boundary

Rev	Date	Amendments	By	Chk

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5e2

Site Location Plan

INFORMATION

	Drawn	Checked	Date
1:1250 @ A1	SR	CW	10.08.22

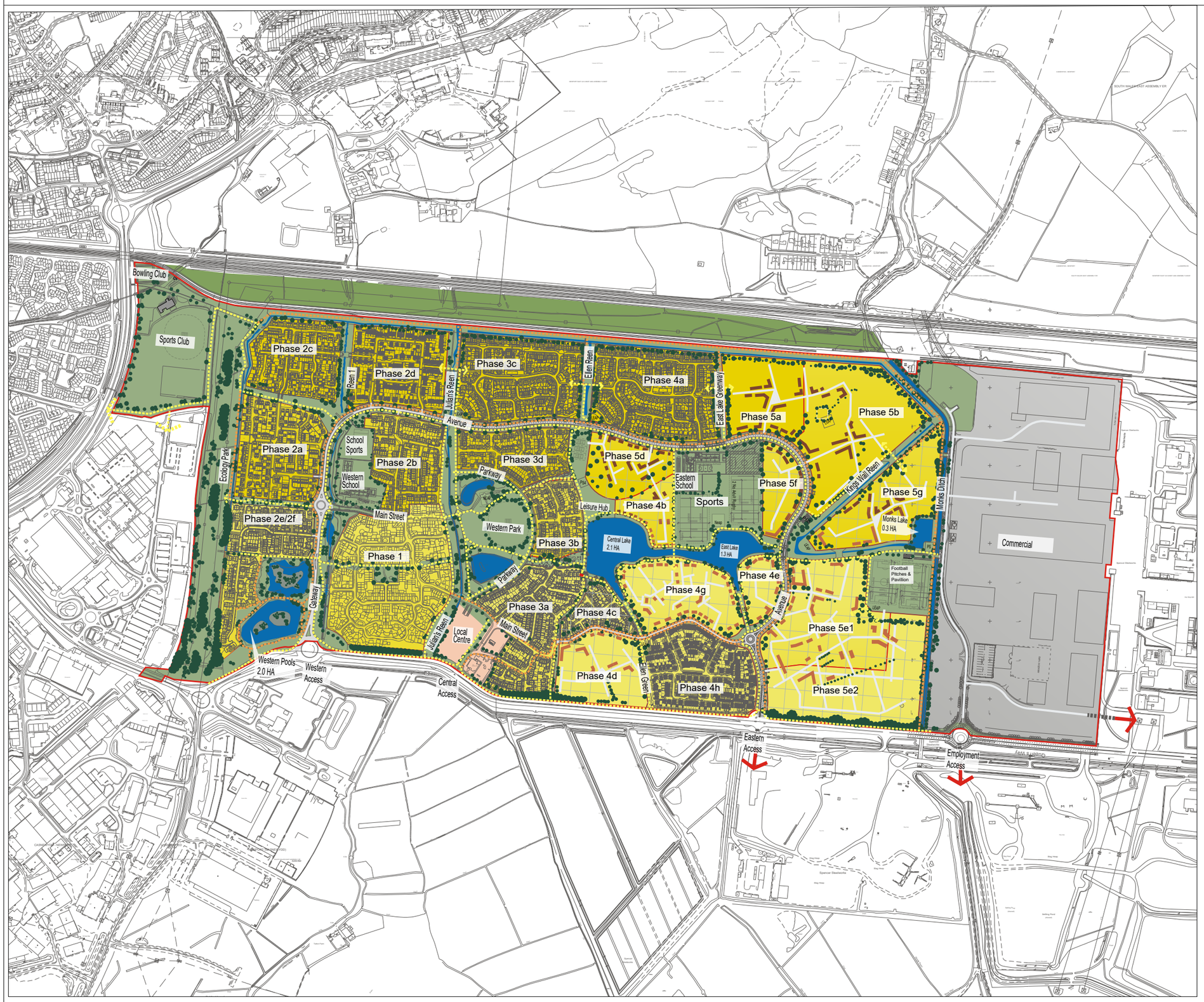
Drawing No. Rev.

18669-RLL-22-XX-RP-O-0298

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Glan Llyn -ESAMP Indicative Masterplan



SGP
Architects + Masterplanners

Waterfront House,
2a Smith Way, Grove Park,
Enderby, Leicester,
LE19 1SX
t: +44 (0)116 247 0557
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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A3 1:2000 40 60 80 100 120 140

N W E S

Phase 4e

Phase 5e1

Phase 5e2

Outfall to be no closer than 100m

Changing

SW Outfall

SW Outfall

Newport & District

Gwent County

The Avenue

FW POC
Suitable for
120 Plots

5.5m access road location to be agreed

LAP

Ø1200 Culvert

FW POC
SW POC
Utilities POC

FW POC
Suitable for
150 Plots

5.5m access road location to be agreed

8m Easement to Monks Ditch

QUEEN'S WAY

QUEEN'S WAY

Spencer Steelworks

KEY

- Infrastructure drainage provided by Seller
- Infrastructure design and construction to be undertaken by purchaser under licence.
- Hard and Soft Landscaping by purchaser
- Infrastructure provided by Seller
- 3m wide combined cycle / footpath. Design may be incorporated into site layout. To be approved by seller

Provision of 4No. LAP by purchaser
Locations shown as indicative only.

NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

- Foul Drainage
  Seller to provide infrastructure drainage up to Foul POC

Surface Water Drainage
Seller to provide infrastructure drainage as shown
Purchasers' SW to design with consideration for submerged outfall up to 4.65m AOD water level.

- Utilities
  Utility point of connection to be agreed with Purchaser.

- Levels
  Minimum Finished Development level 6.50m AOD. Contour levels indicated are finished ground levels, the site will prepared to formation levels, approx. 750mm below FGL.
  Refer to As-Built survey for level info.
  Tolerance on levels + - 50mm.
  Refer to Atkins specification regarding maximum development levels

- Entrances / Pedestrian links
  Location to suit Purchasers site layout, to be in accordance with Glan Llyn Western Sub-Area masterplan.

- Site Infrastructure
  The design and construction of all infrastructure outside of phase boundary is to be approved by the seller and relevant adopting authorities. The seller will assume maintenance responsibility for all culverts and headwalls.

REV	DATE	REVISION NOTE	BY

PJA
Seven House - High Street
Longbridge - Birmingham
B31 2UQ - Tel: 0121 475 0234
Birmingham - Bristol
Exeter - London - Reading
pja.co.uk

CLIENT
St. Modwen Developments

PROJECT
Llanwern
Newport

DRAWING TITLE
Phase 5e2
Engineering Constraints

DRAWING ISSUE STATUS
INFORMATION

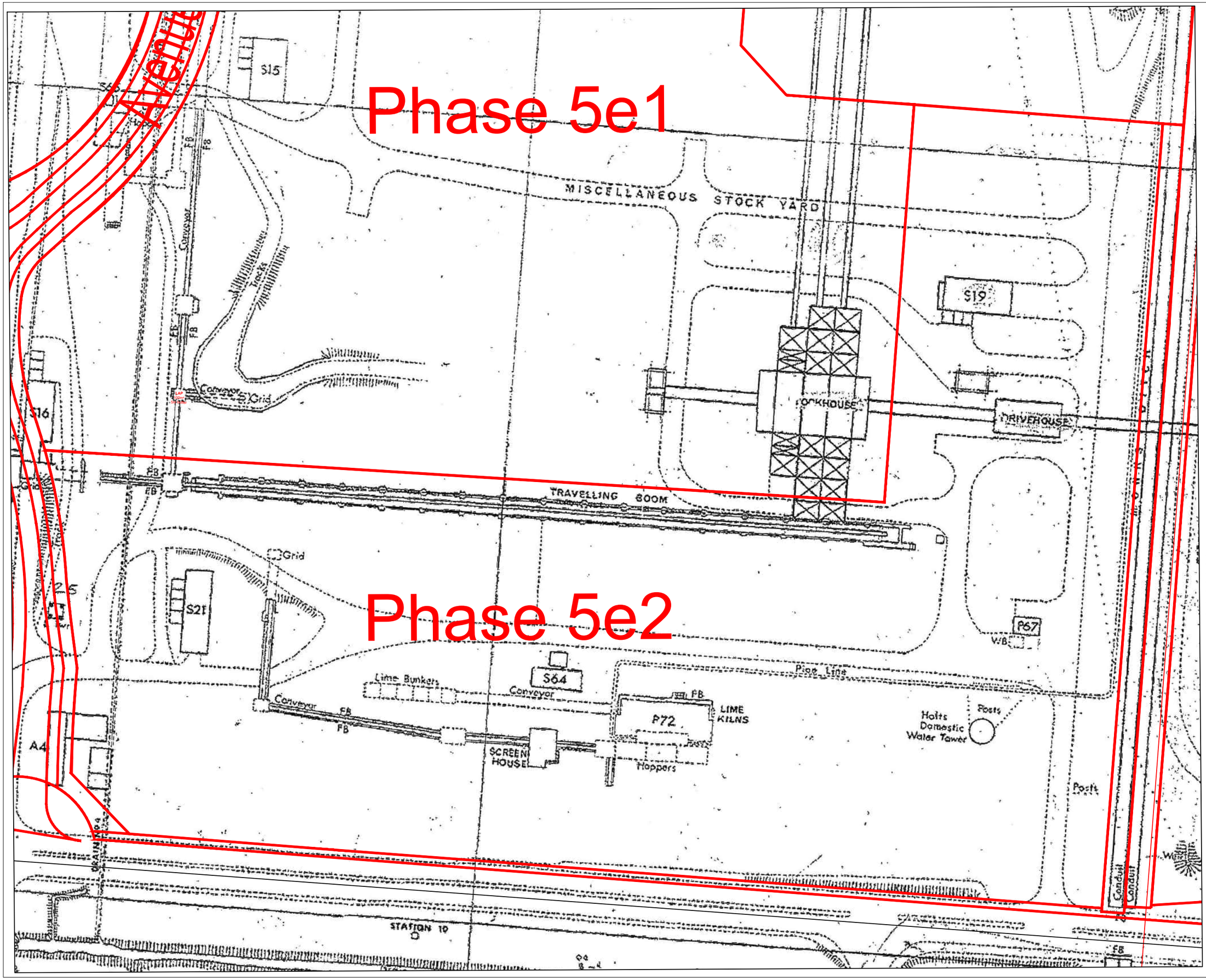
PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
02554	F	5e210	P0

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A3@1:2000	GH	DMcC	04.01.21

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Rev	Date	Amendments	By	Chk

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E2

Historical Obstructions Plan

INFORMATION

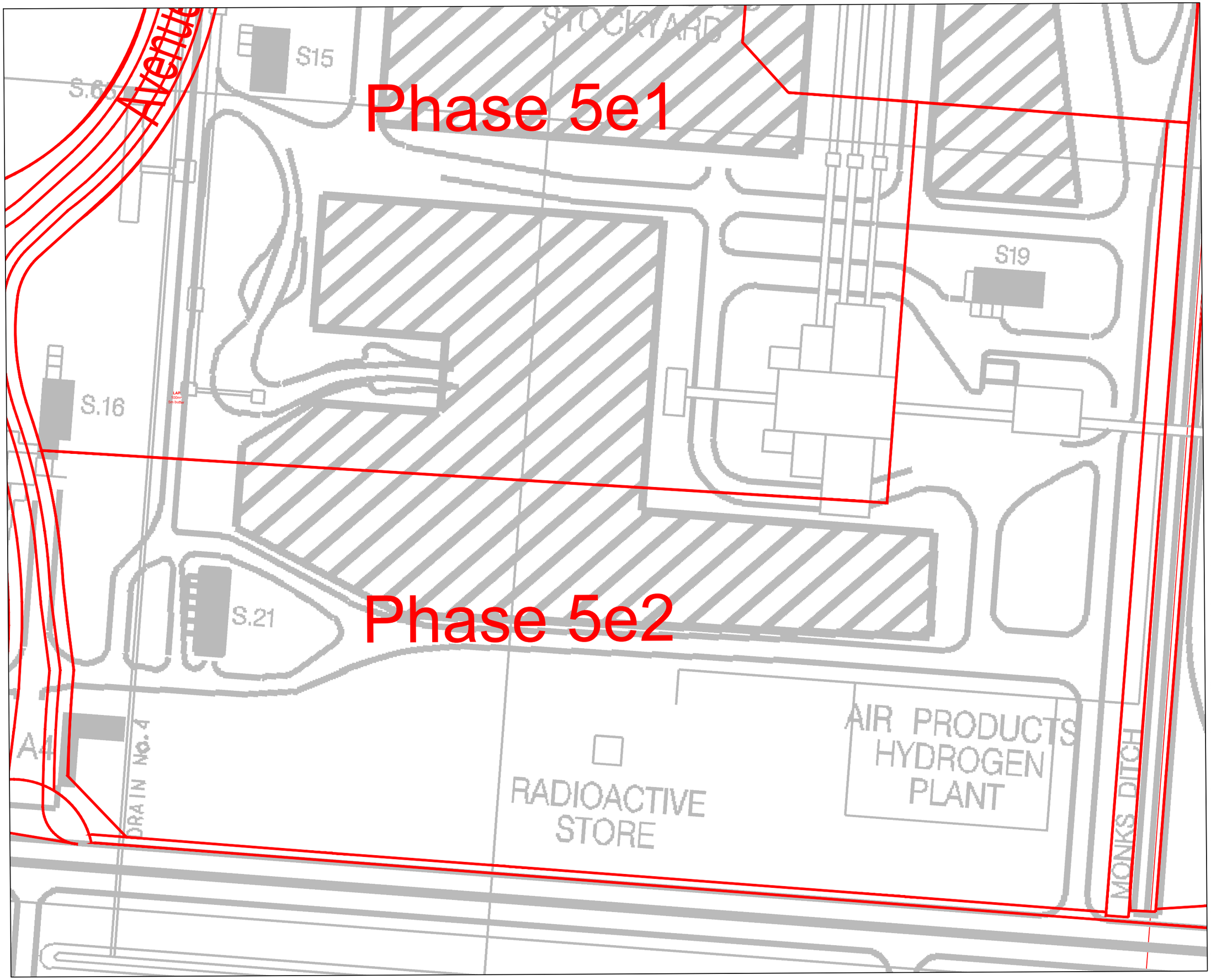
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NTS	SR	CW	10.08.22

Drawing No. Rev.

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Rev	Date	Amendments	By	Chk

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E2

Historical Working Plan Overlay

INFORMATION

	Drawn	Checked	Date
NTS	SR	CW	10.08.22

Drawing No. Rev.

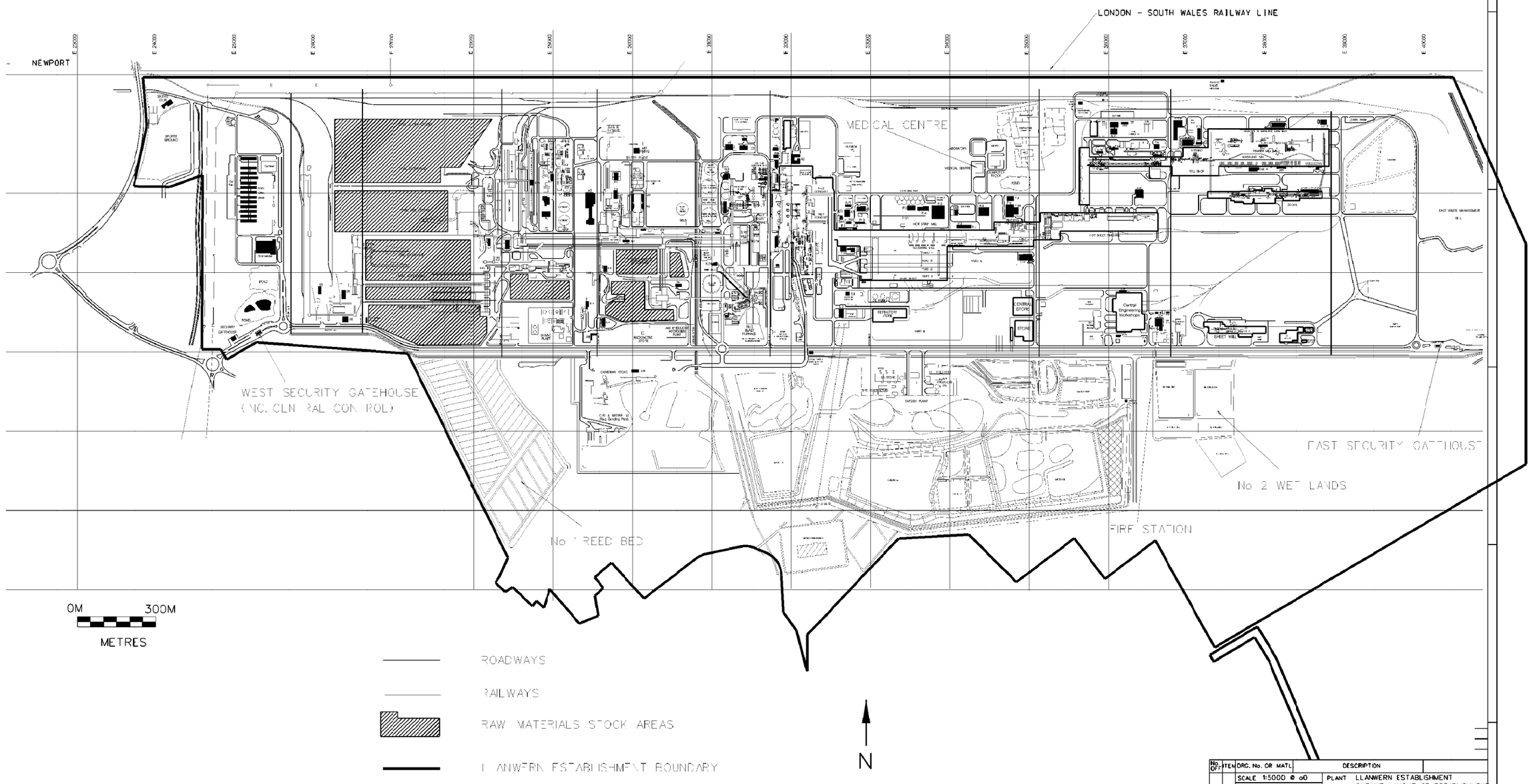
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ORIGINATING OFFICE DRG.No. 839181	RECEIVING OFFICE DRG.No.	FIRST ANGLE PROJECTION	CONFIDENTIAL - BRITISH STEEL LIMITED	DO NOT SCALE

MAP 1
APPENDIX 15.1



No. OFF	ITEM	DRG. No. OR MATL	DESCRIPTION
		SCALE 1:5000 @ a0	PLANT LLANWERN ESTABLISHMENT
		UNIT OF MEASUREMENT	SECTION OUTLINE LAYOUT OF ESTABLISHMENT
		DRAWN N.W.C. 09.12.99	DESCRIPTION
		CHECKED	ROADS, RAILS AND STOCKING AREAS FOR COMAH REPORT
		TRACED	
		PASSED	COPYRIGHT-BRITISH STEEL LIMITED© 19

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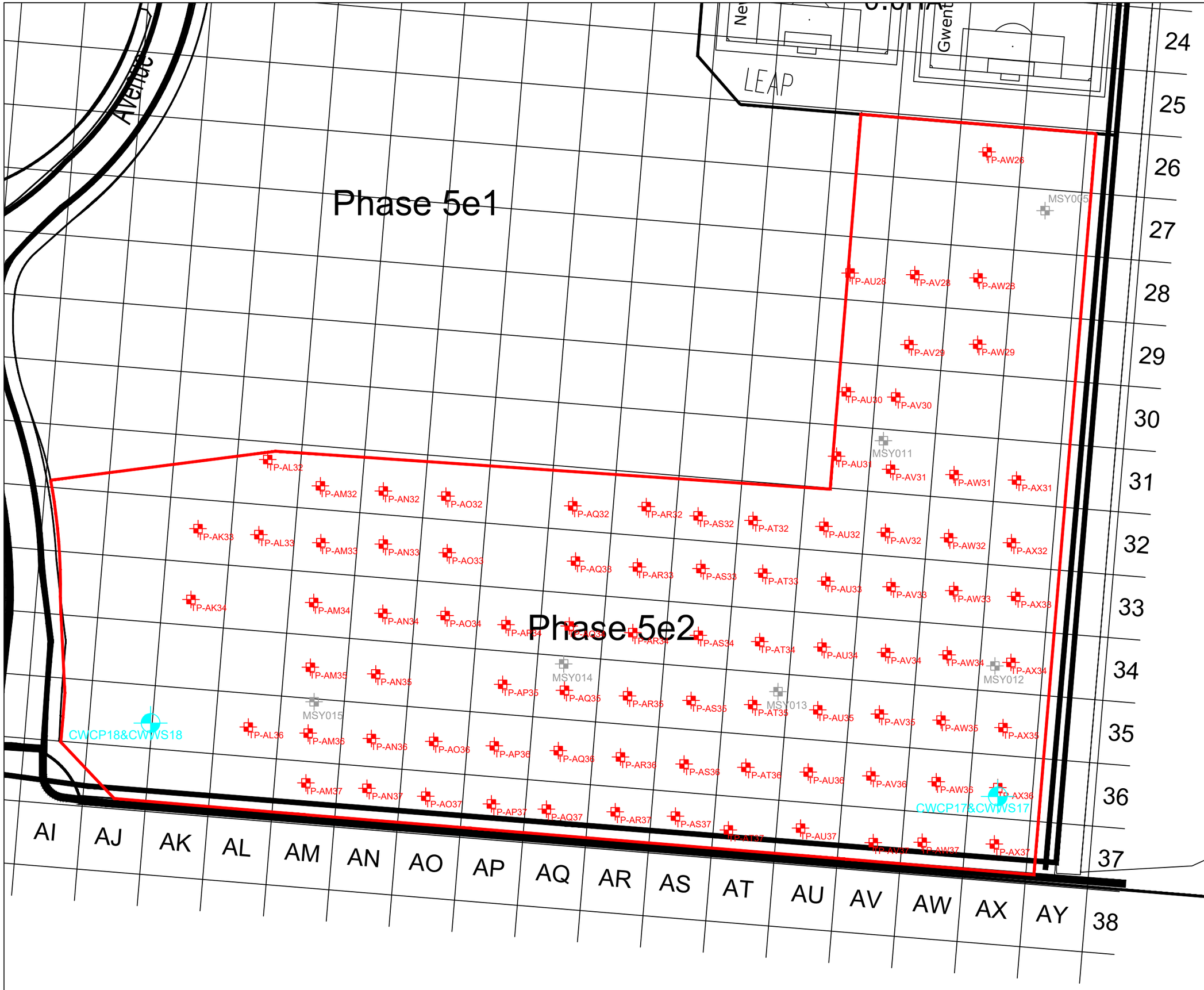
ORIGINATING OFFICE
DRG.No. 839181
RECEIVING OFFICE
DRG.No.

DIVISION STRIP PRODUCTS
WORKS LLANWERN

British Steel Limited

C.A.D.

PRELIMINARY No 5 7/2/01



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KEY:

- ATKINS (2014) TRIAL PIT LOCATIONS
- ATKINS (2016) EXPLORATORY HOLE LOCATIONS
- RLE (2020/21) TRIAL PIT LOCATIONS

Rev	Date	Amendments	By	Chk
P02	26/05/2026	Added Trial Pit Locations	AMS	CW
P01	13/03/2024	First Issue	ET	FT

Client

Brighton STM Developments Limited (BSTMDL)

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E2 Exploratory Hole Location Plan

INFORMATION

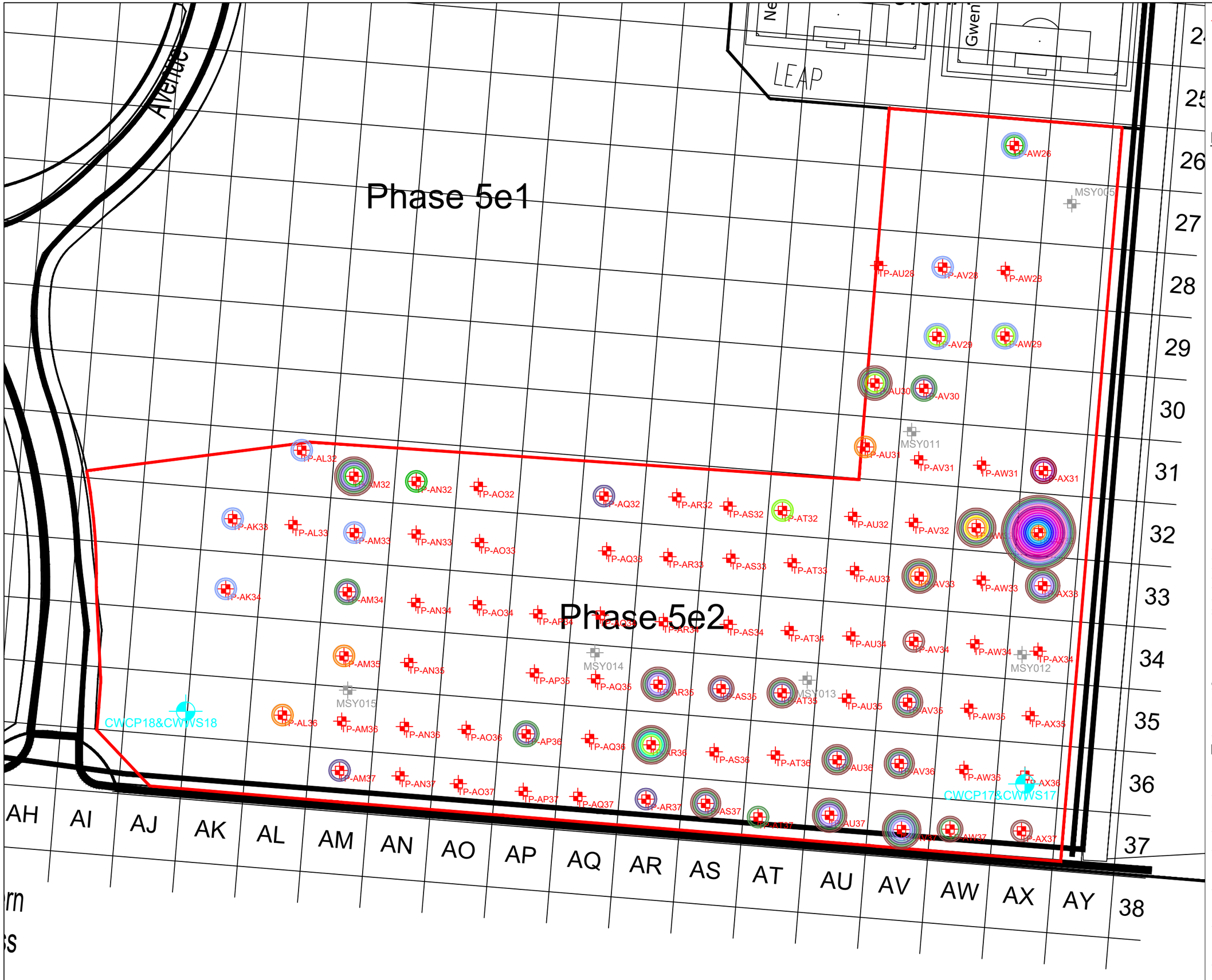
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Drawing No. — Rev.

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KEY:

- ATKINS (2014) TRIAL PIT LOCATIONS
- ATKINS (2016) EXPLORATORY HOLE LOCATIONS
- RLE (2020/21) TRIAL PIT LOCATIONS
- ARSENIC EXCEEDANCE
- NICKEL EXCEEDANCE
- LEAD EXCEEDANCE
- VANADIUM EXCEEDANCE
- ZINC EXCEEDANCE
- ALIPHATIC TPH >C8-C10 EXCEEDANCE
- ALIPHATIC TPH >C10-C12 EXCEEDANCE
- ALIPHATIC TPH >C12-C16 EXCEEDANCE
- AROMATIC TPH >C8-C10 EXCEEDANCE
- AROMATIC TPH >C10-C12 EXCEEDANCE
- AROMATIC TPH >C12-C16 EXCEEDANCE
- AROMATIC TPH >C16-C21 EXCEEDANCE
- AROMATIC TPH >C21-C35 EXCEEDANCE
- AROMATIC TPH >C35-C44 EXCEEDANCE
- BENZENE EXCEEDANCE
- PHENANTHRENE EXCEEDANCE
- BENZO[A]ANTHRACENE EXCEEDANCE
- CHRYSENE EXCEEDANCE
- BENZO[B]FLUORANTHENE EXCEEDANCE
- BENZO[A]PYRENE EXCEEDANCE
- DIBENZ[G,H,I]PERYLENE EXCEEDANCE

Rev	Date	Amendments	By	Chk
P01	29/05/2026	First Issue	AMS	CW

Client

Brighton STM Developments Limited

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 5E2 Chemical Soil Results

S4UL Exceedance Location Plan

INFORMATION

	Drawn	Checked	Date
NTS	AMS	CW	29/05/26

Drawing No. — Rev.

18669-RLL-26-XX-DR-O-0897 P01

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Appendix B
Site Walkover Photographs



Southern boundary of 5e2, occupied by several stockpiles of subsoil.



South West corner of 5e2 bounded by the Queens Way and Celtest water treatment works.



Eastern part of 5e2, comprising of smaller stockpiles including construction waste.



Central and Eastern part of 5e2 comprises of stockpiles and an open area containing construction waste.

Appendix C
Historical Maps

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Sloping Masonry
Pylon
Pole
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

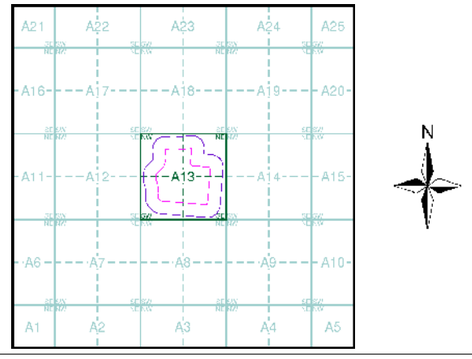
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

Envirocheck®
LANDMARK INFORMATION GROUP®

Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Monmouthshire	1:10,560	1886 - 1887	3
Monmouthshire	1:10,560	1902	4
Monmouthshire	1:10,560	1922	5
Monmouthshire	1:10,560	1938 - 1954	6
Historical Aerial Photography	1:10,560	1947	7
Historical Aerial Photography	1:10,560	1947	8
Monmouthshire	1:10,560	1954	9
Ordnance Survey Plan	1:10,000	1965	10
Ordnance Survey Plan	1:10,000	1973	11
Newport	1:10,000	1983	12
Ordnance Survey Plan	1:10,000	1989	13
10K Raster Mapping	1:10,000	1999	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2021	16

Historical Map - Slice A



Order Details

Order Number: 287158115_1_1
Customer Ref: P18-669 5e1/5e2
National Grid Reference: 336530, 186530
Slice: A
Site Area (Ha): 14.1
Search Buffer (m): 1000

Site Details

Site at 336524,186542

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Russian Military Mapping Legends

1:5,000 and 1:10,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Fireproof Building
- Prominent Fireproof Building
- Non-fireproof Building
- Non-fireproof Building (non-dwelling)
- Factory, mill, and flour mill, with chimneys
- Factory, mill, and flour mill, without chimneys
- Power Station, drawn to scale
- Hydroelectric Power Station
- Radio Station, drawn to scale
- Telephone Station, drawn to scale
- Abandoned Open-pit Mine or Quarry
- Open-pit Salt Mine
- Pit
- Oil Deposit or Well
- Oil Seepage
- Tailings Pile
- Fuel Storage Tanks
- Natural Gas Tank
- Bench Mark
- Drill Hole
- Burial Mound
- Triangulation Point on Burial Mound
- Single-track Railroad
- Double-track Railroad and Station Building
- Coniferous Forest
- Deciduous Forest
- Mixed Forest
- Lawns
- Citrus Orchard
- Wet Ground
- Scattered Vegetation

243,8 — Values for prominent elevations

186.0 — Numbers for spot elevations, depth soundings, contour lines, etc.

0,2 — Velocity of the current, width of river bed, depth of river

Fractional terms: length and capacity of bridges; depth of fords and condition of the river bottom; height of forest and the diameter of trees

Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (–)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping

a. Not drawn to scale b. Drawn to scale

- Government and Administrative Buildings
- Military and Industrial Buildings
- Military and Communication Areas
- Subway Entrance
- Partly Demolished Buildings
- Demolished Buildings
- Built-Up Area with Fireproof Buildings Predominant
- Built-Up Area with Non-Fireproof Buildings Predominant
- Individual Fireproof Building
- Prominent Industrial Building
- Individual Dwelling, Fireproof
- Ruins of an Individual Dwelling
- Factory or Mill Chimney
- Factory or Mill with Chimney
- Factory or Mill without Chimney
- Mine or Open Pit Mine
- Operating Shaft or Mine
- Non-Operating Shaft or Mine
- Salt Mine
- Tailings Pile
- Pit
- Stone Quarry
- Gas Pump or Service Station
- Fuel Storage or Natural Gas Tank
- Oil or Natural Gas Derrick
- Small Hydroelectric Power Station
- Power Station
- Transformer Station
- Cemetery
- Burial Mound (height in metres)
- Triangulation Point on Burial Mound
- Triangulation Point
- Bench Mark
- Bench Mark (monumented)
- Telegraph Office
- Telephone Station
- Radio Station
- Radio Tower
- Airfield or Seaplane Base
- Landing Strip
- Main Highway
- Highway under Construction
- Improved Dirt Road (former truck road)
- Double-track Railroad with First Class Station
- Dismantled Railroad
- Railroad Under Construction
- Shore Embankment
- River or Ditch with Embankment
- Well
- Water Reservoir or Rain Water Pit
- Spring
- Isobath with value
- Heavy (Index) Contour Line
- Contour Line and Value
- Half Contour Line
- Spot Elevation Value
- Coniferous
- Deciduous
- Mixed
- Scrub

Key to Numbers on Mapping

ST38NE_Newport

No.	Description
29	Mill (Steel)
71	Railway Station

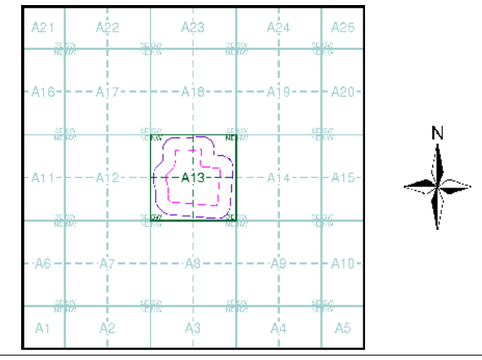
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Monmouthshire	1:10,560	1886 - 1887	3
Monmouthshire	1:10,560	1902	4
Monmouthshire	1:10,560	1922	5
Monmouthshire	1:10,560	1938 - 1954	6
Historical Aerial Photography	1:10,560	1947	7
Historical Aerial Photography	1:10,560	1947	8
Monmouthshire	1:10,560	1954	9
Ordnance Survey Plan	1:10,000	1965	10
Ordnance Survey Plan	1:10,000	1973	11
Newport	1:10,000	1983	12
Ordnance Survey Plan	1:10,000	1989	13
10K Raster Mapping	1:10,000	1999	14
10K Raster Mapping	1:10,000	2006	15
VectorMap Local	1:10,000	2021	16

Russian Map - Slice A



Order Details

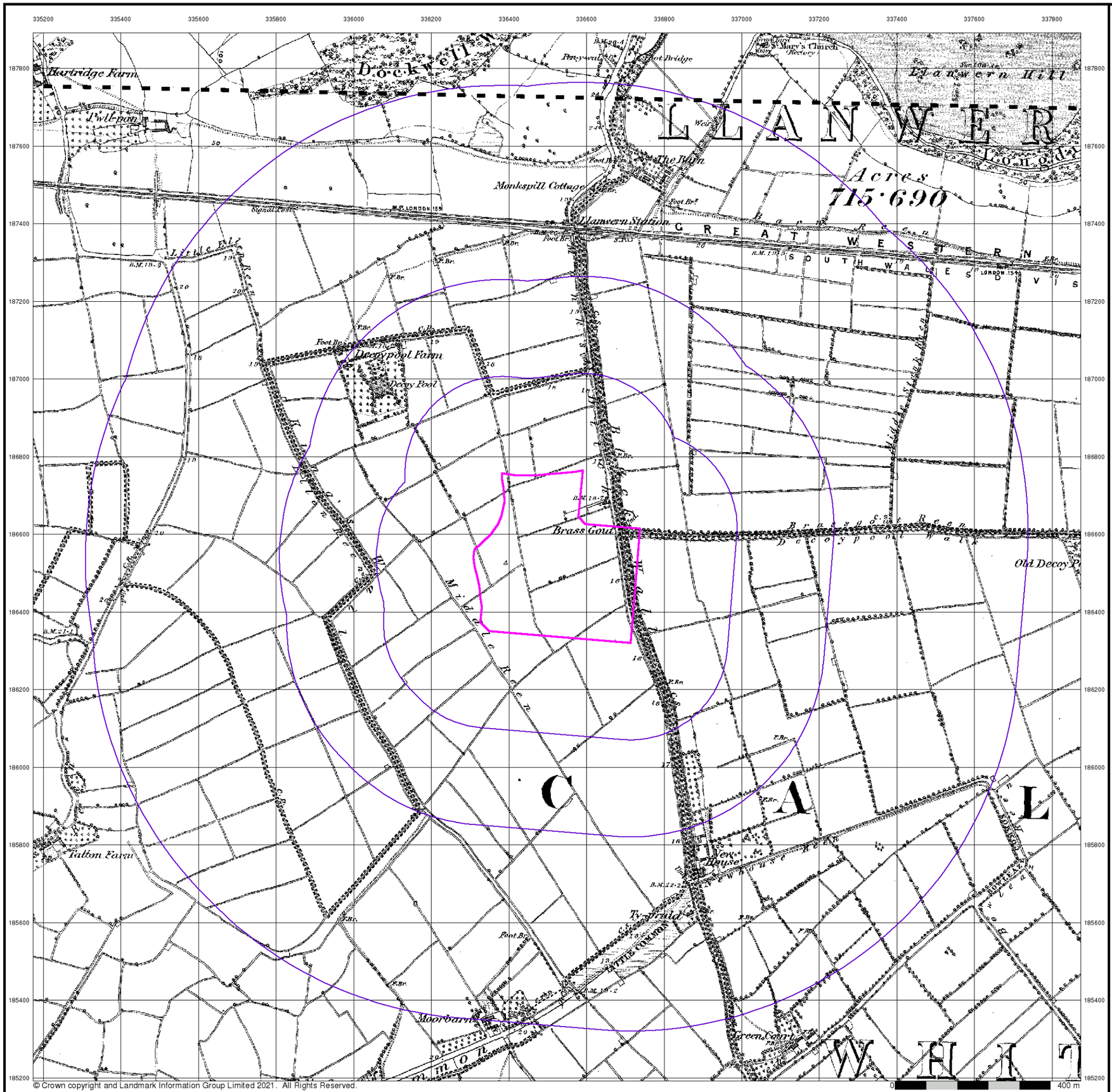
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Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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Monmouthshire

Published 1886 - 1887

Source map scale - 1:10,560

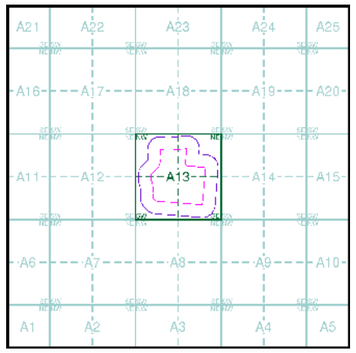
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

02900
1886
1:10,560

03400
1887
1:10,560

Historical Map - Slice A



Order Details

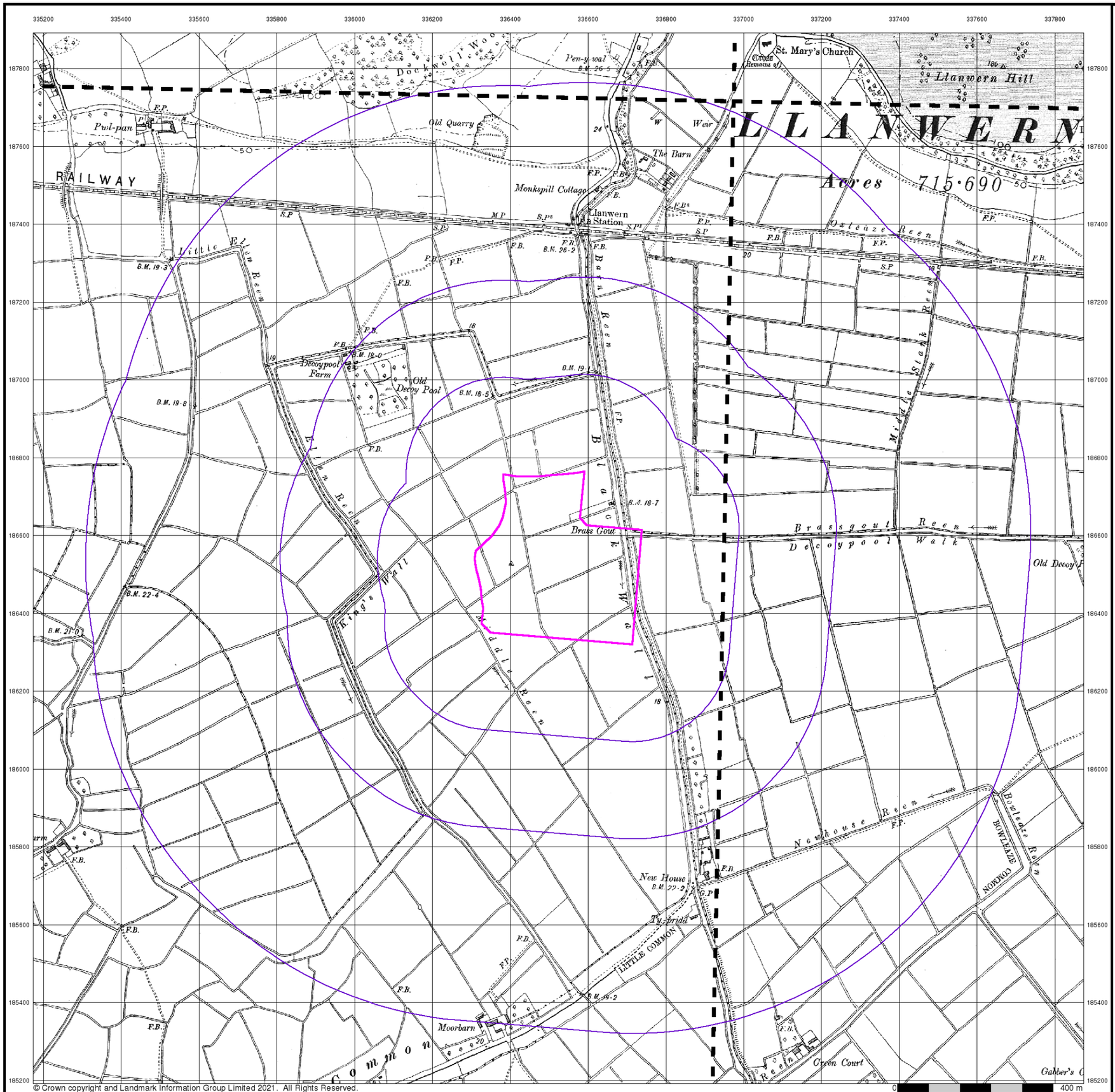
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Slice:	A
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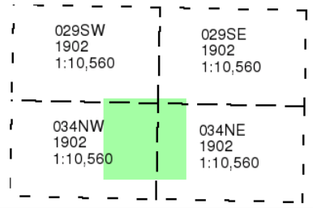
Monmouthshire

Published 1902

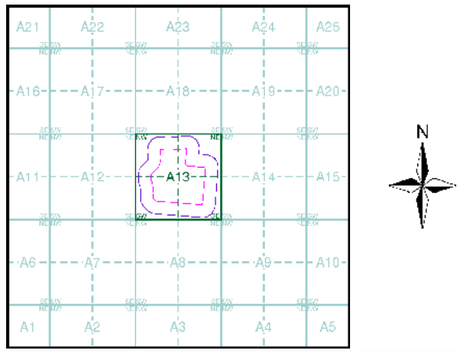
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

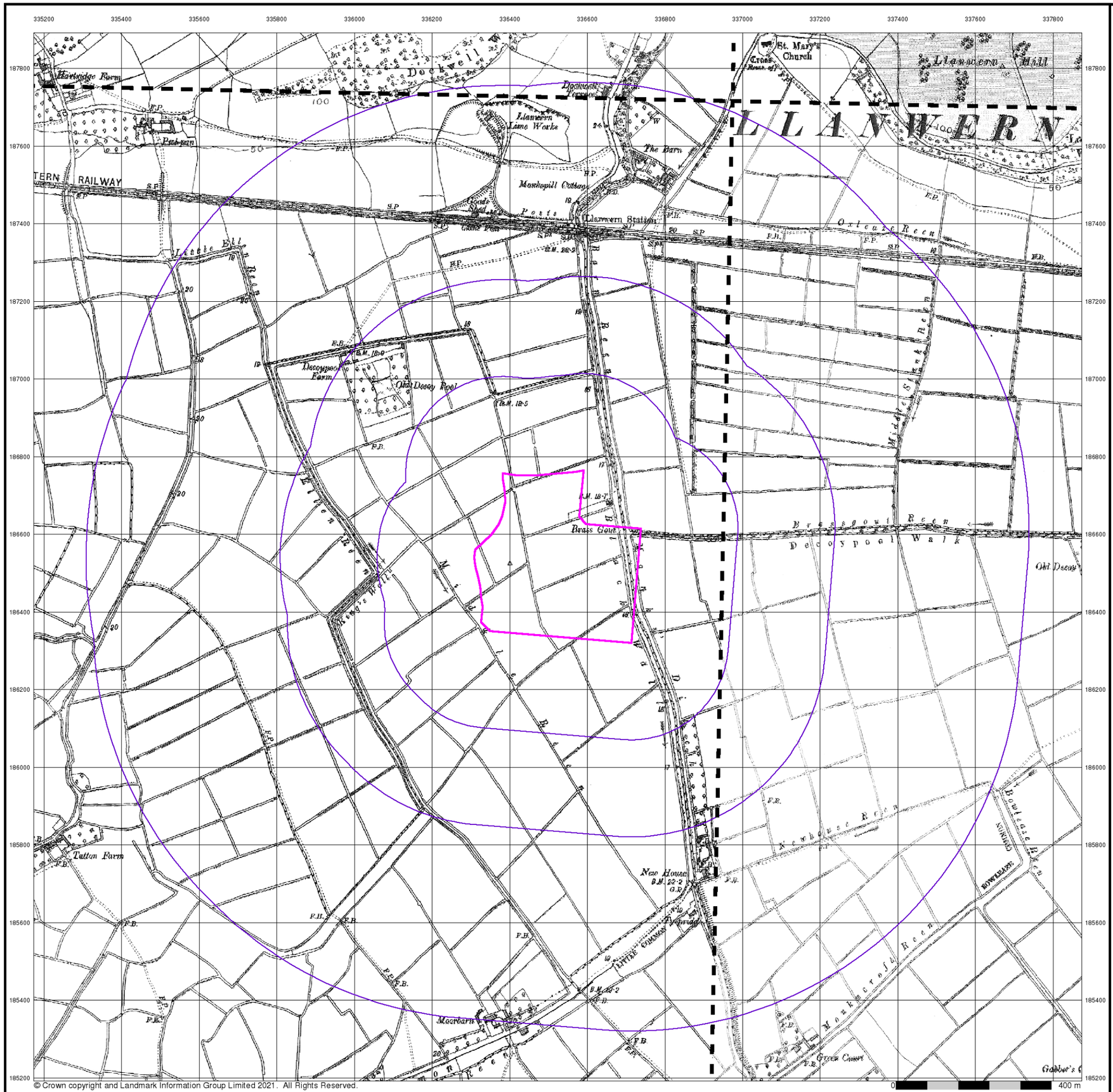
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Slice:	A
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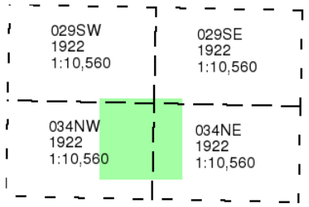
Monmouthshire

Published 1922

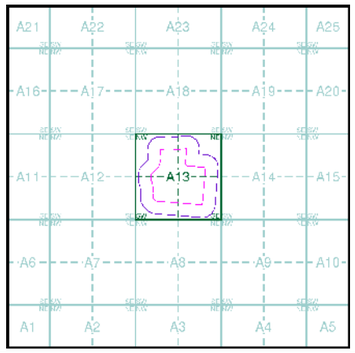
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

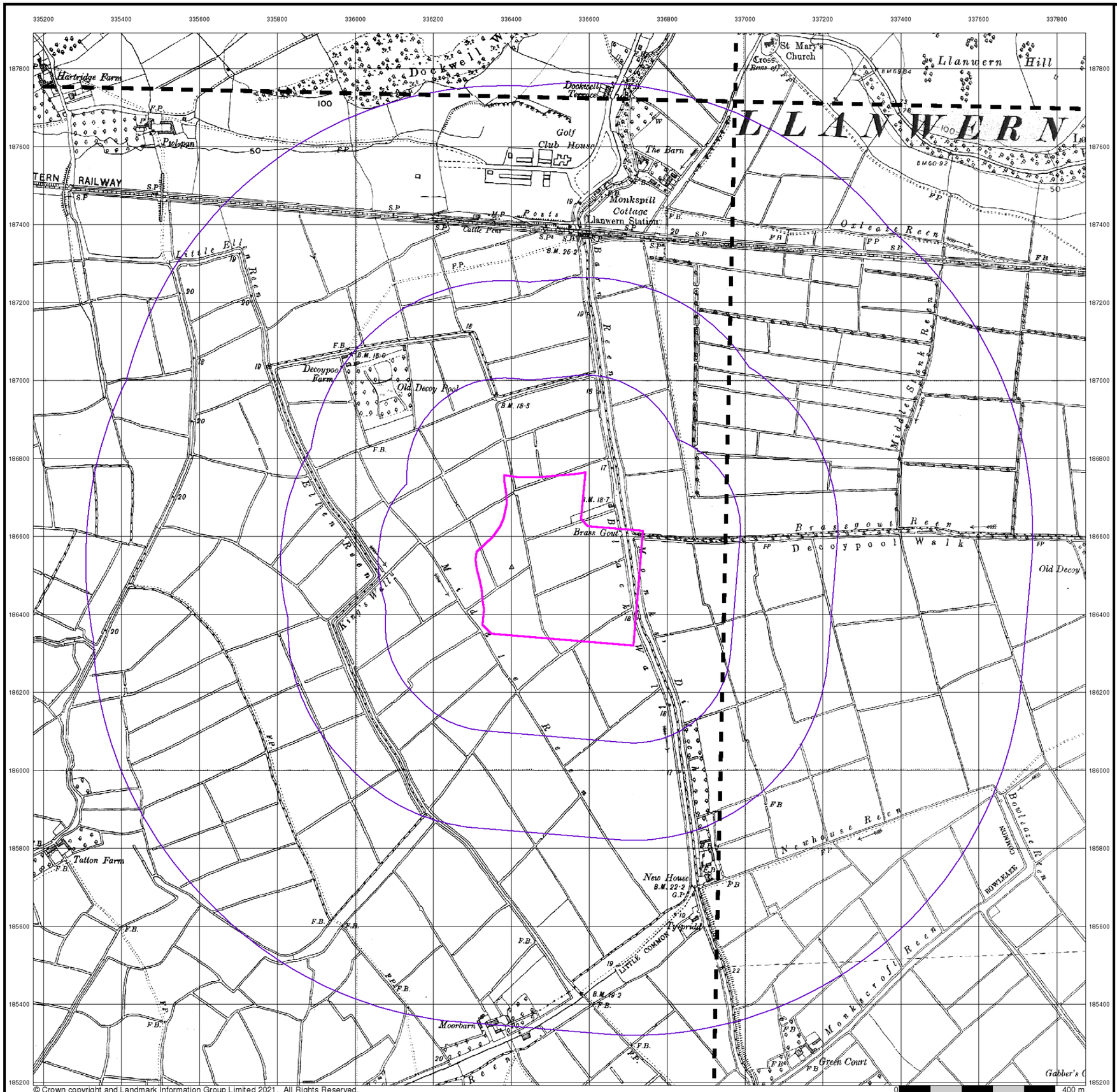
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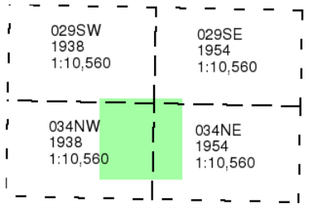
Monmouthshire

Published 1938 - 1954

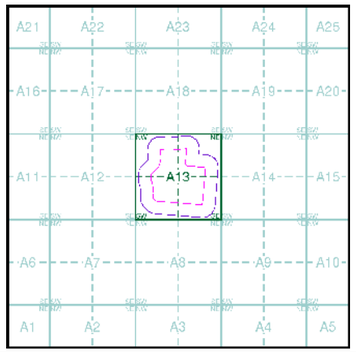
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

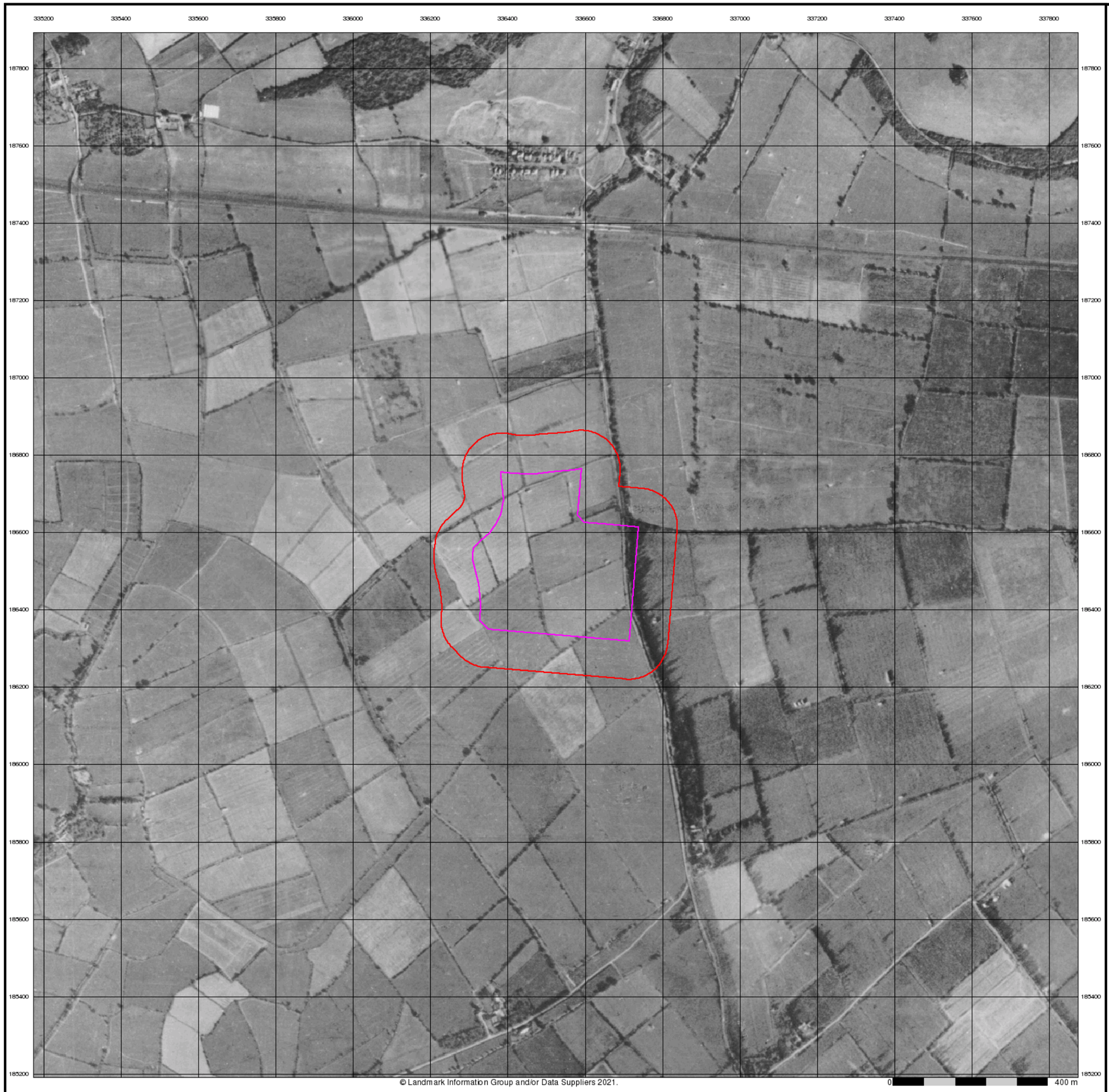
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Historical Aerial Photography

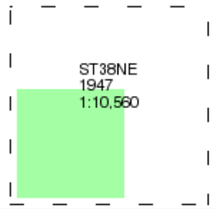
Published 1947

Source map scale - 1:10,560

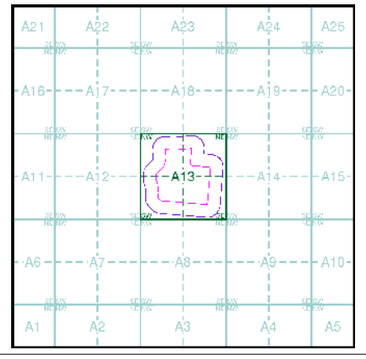
The Historical Aerial Photos were produced by the Ordnance Survey at a scale of 1:1,250 and 1:10,560 from Air Force photography. They were produced between 1944 and 1951 as an interim measure, pending preparation of conventional mapping, due to post war resource shortages. New security measures in the 1950's meant that every photograph was re-checked for potentially unsafe information with security sites replaced by fake fields or clouds. The original editions were withdrawn and only later made available after a period of fifty years although due to the accuracy of the editing, without viewing both revisions it is not easy to spot the edits. Where available Landmark have included both revisions.

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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



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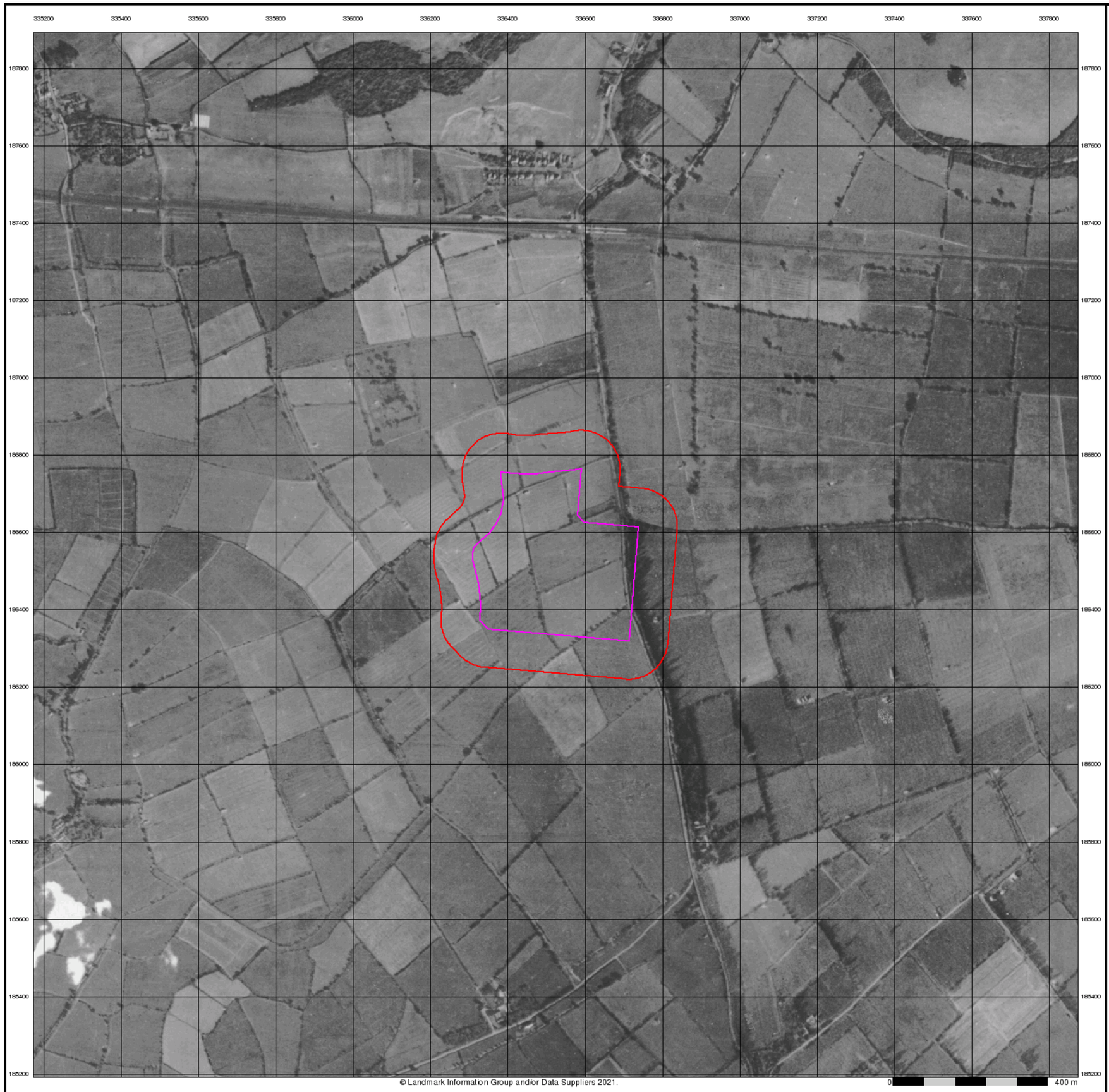
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Historical Aerial Photography

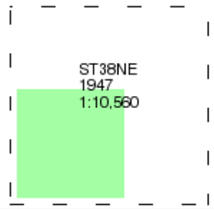
Published 1947

Source map scale - 1:10,560

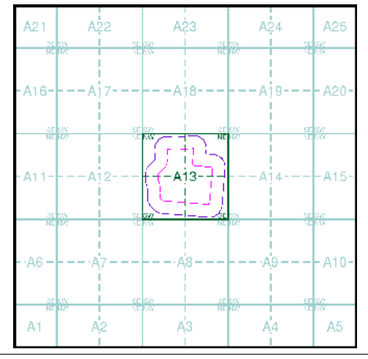
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Map Name(s) and Date(s)



Historical Aerial Photography - Slice A



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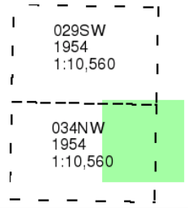
Monmouthshire

Published 1954

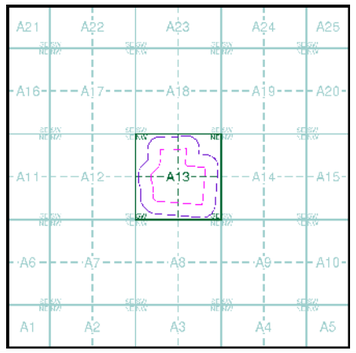
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



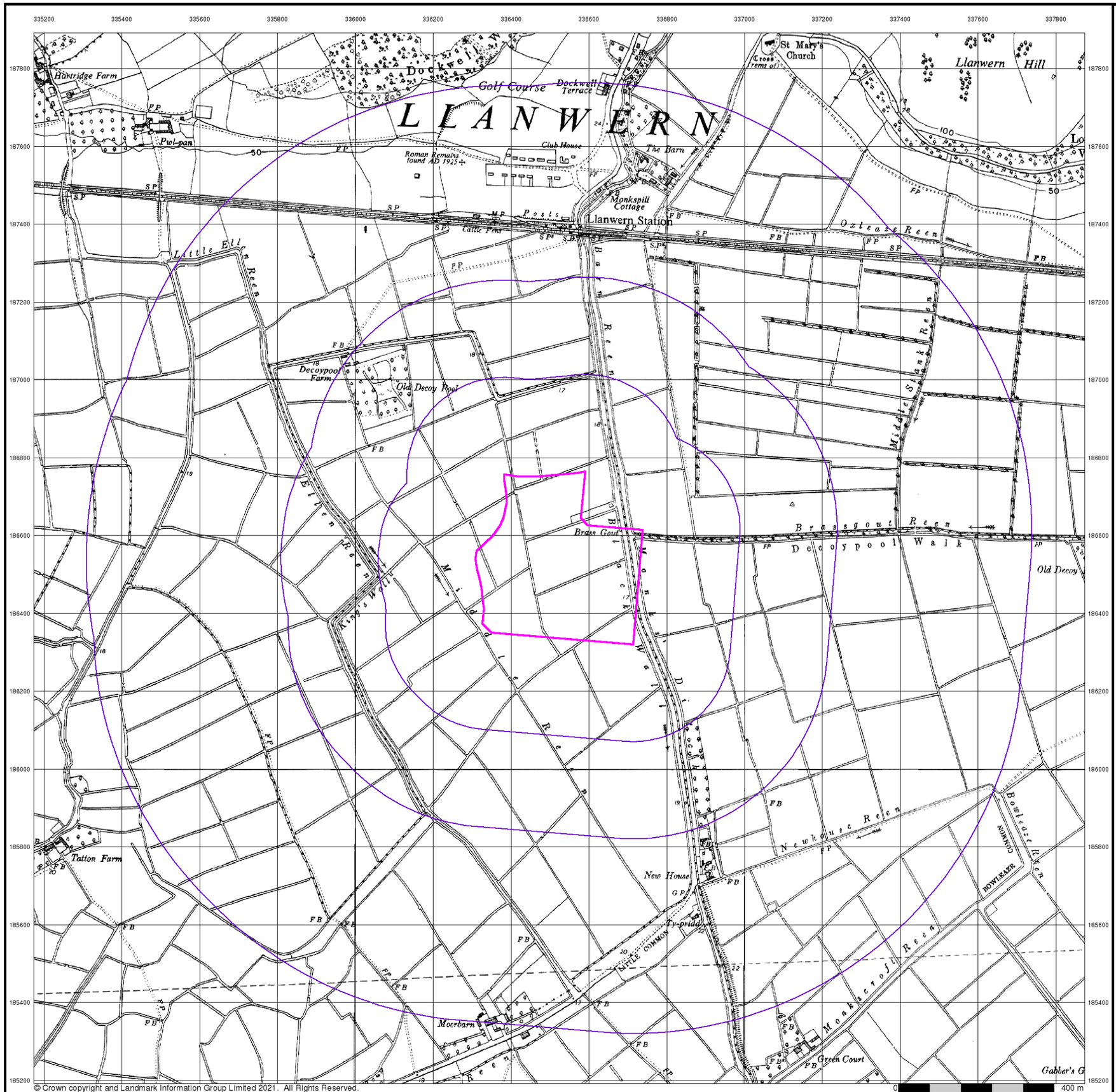
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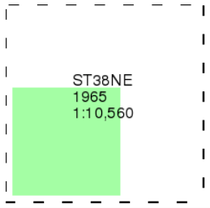
Ordnance Survey Plan

Published 1965

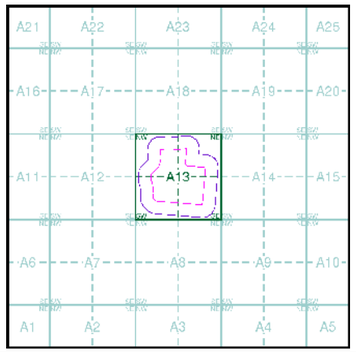
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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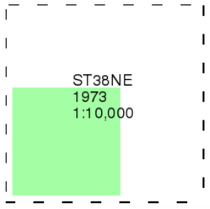
Ordnance Survey Plan

Published 1973

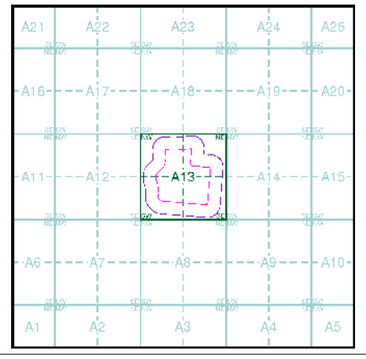
Source map scale - 1:10,000

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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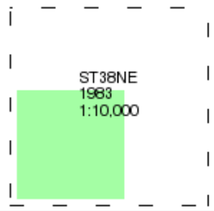
Newport

Published 1983

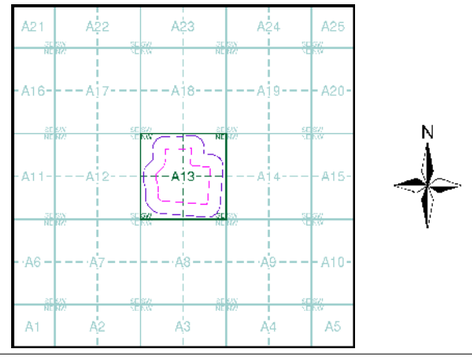
Source map scale - 1:10,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
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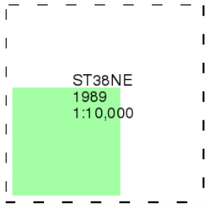
Ordnance Survey Plan

Published 1989

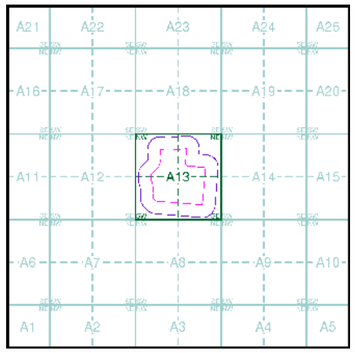
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

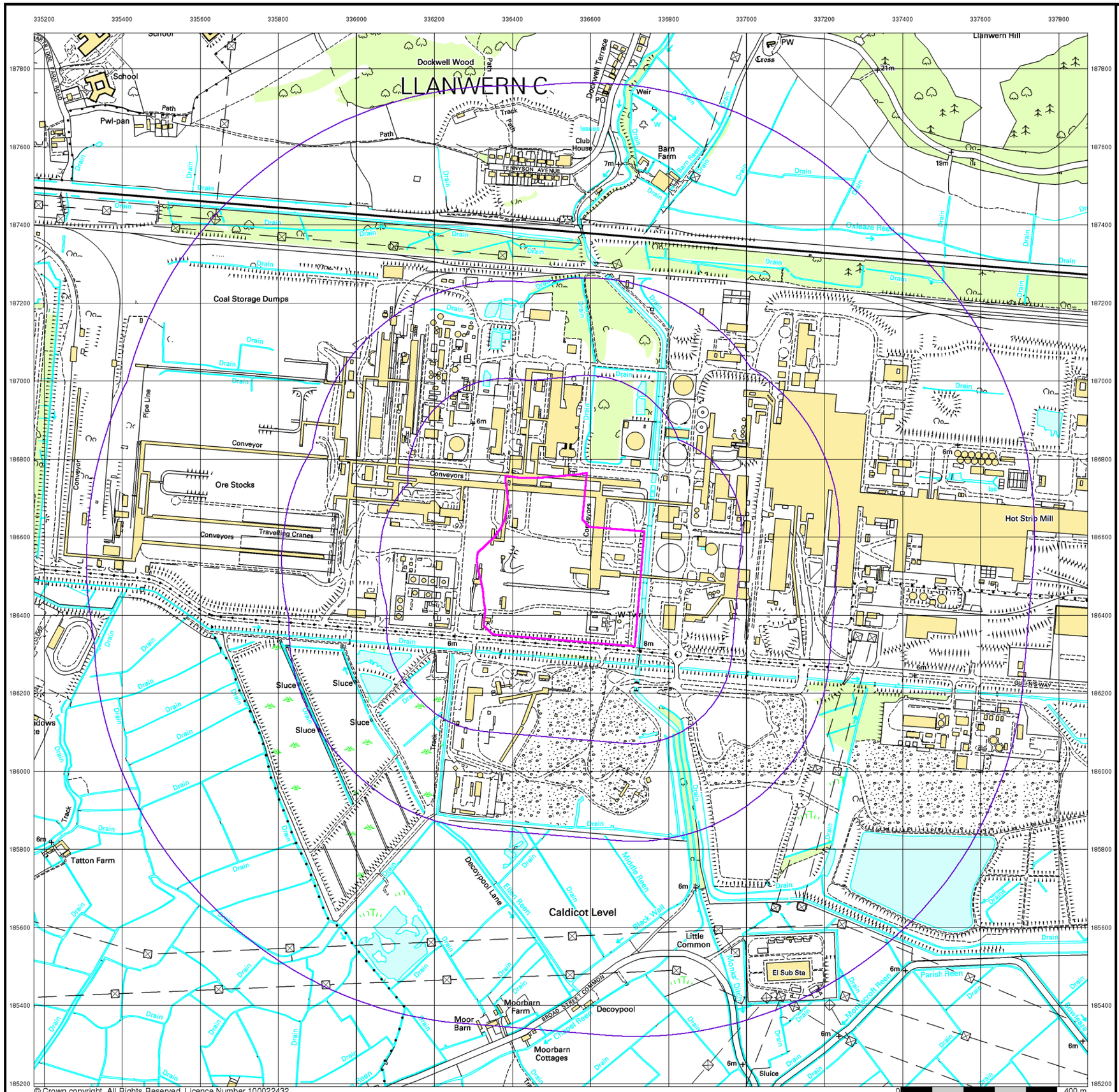
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Site Area (Ha):	14.1
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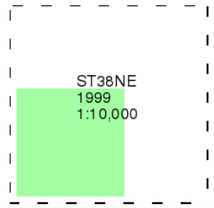
10k Raster Mapping

Published 1999

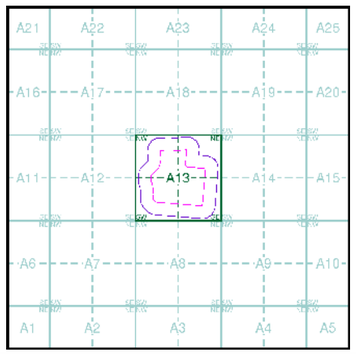
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



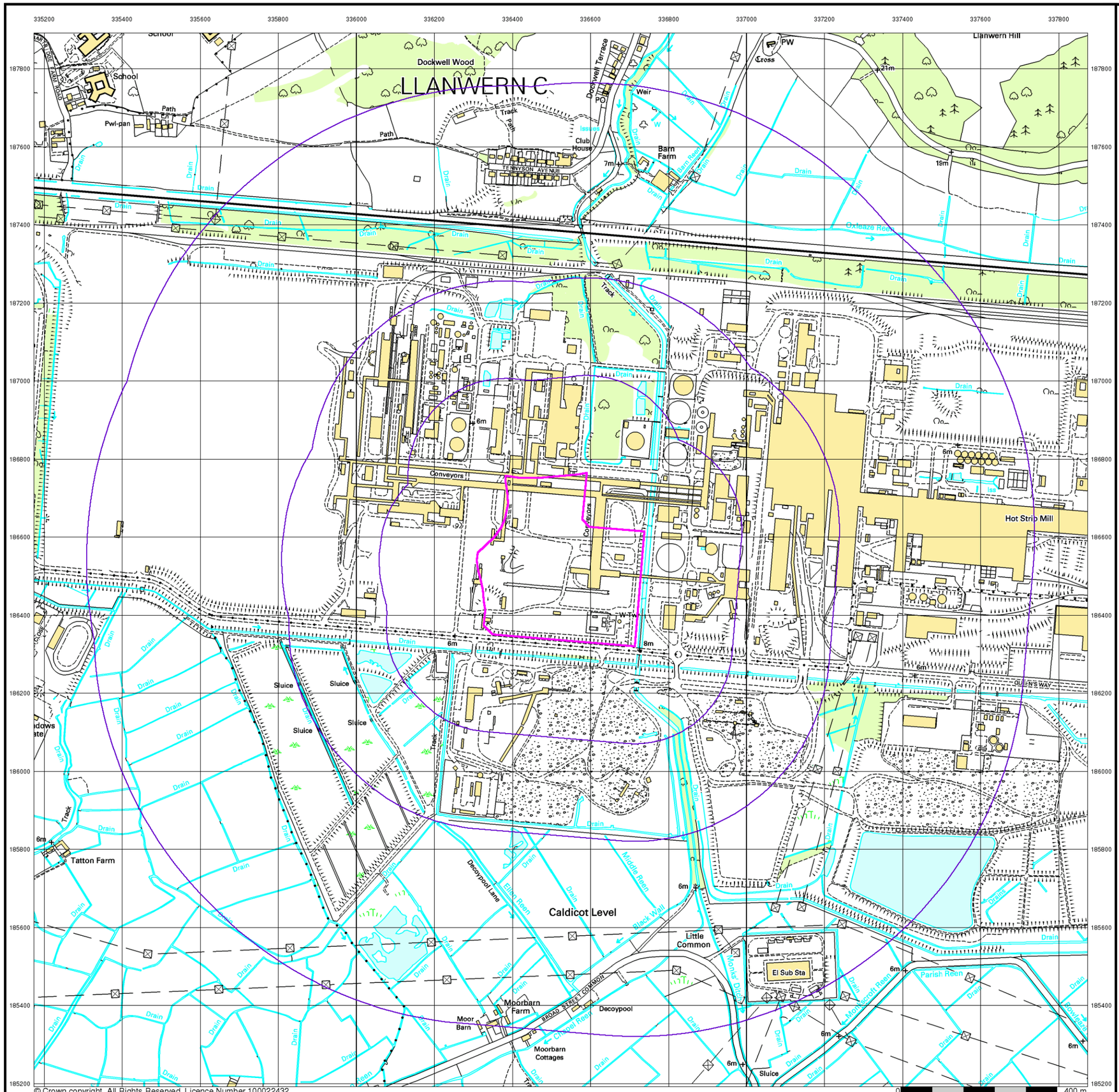
Order Details

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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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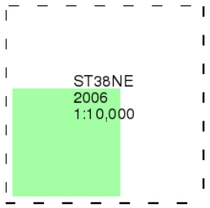
10k Raster Mapping

Published 2006

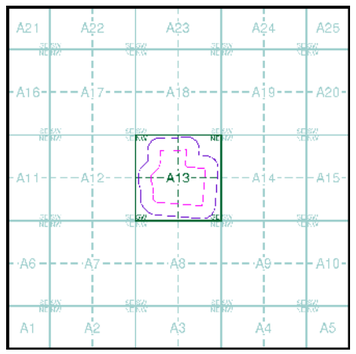
Source map scale - 1:10,000

The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

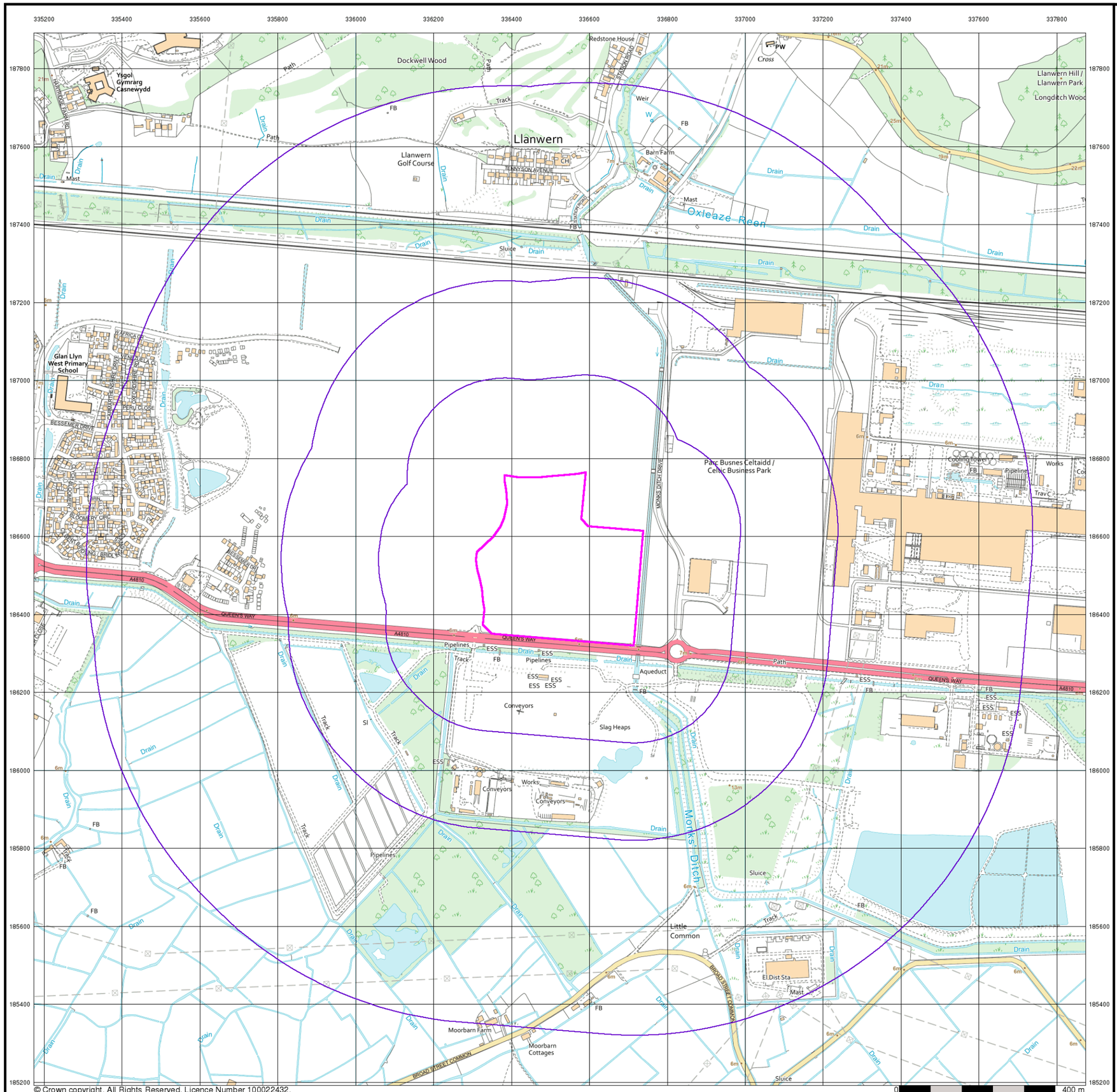
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Slice:	A
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Search Buffer (m):	1000

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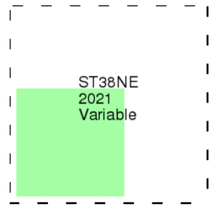
VectorMap Local

Published 2021

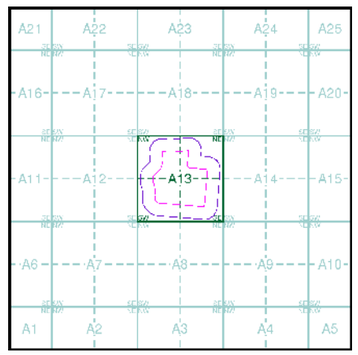
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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Site Details

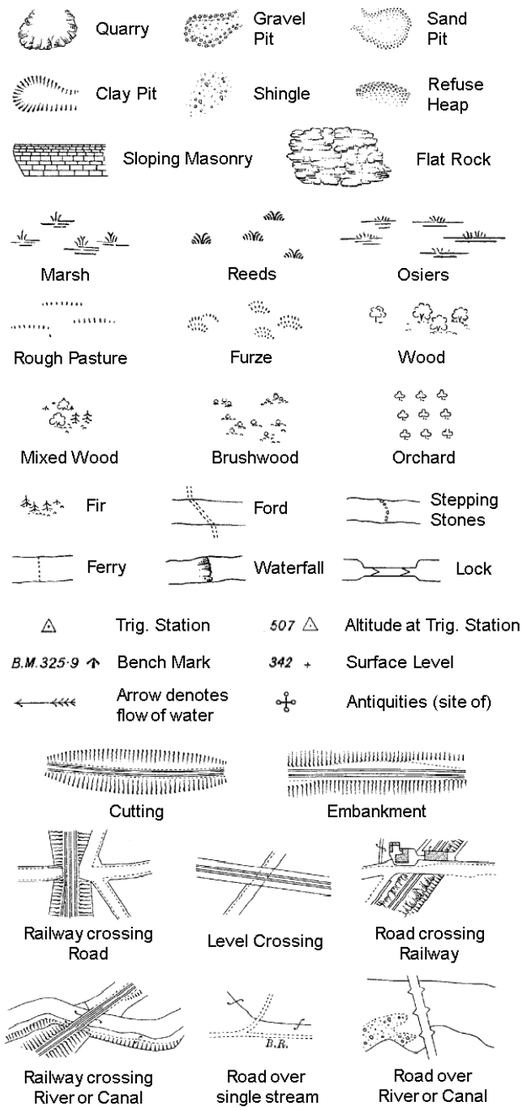
Site at 336524,186542

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Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)

County & Civil Parish Boundary

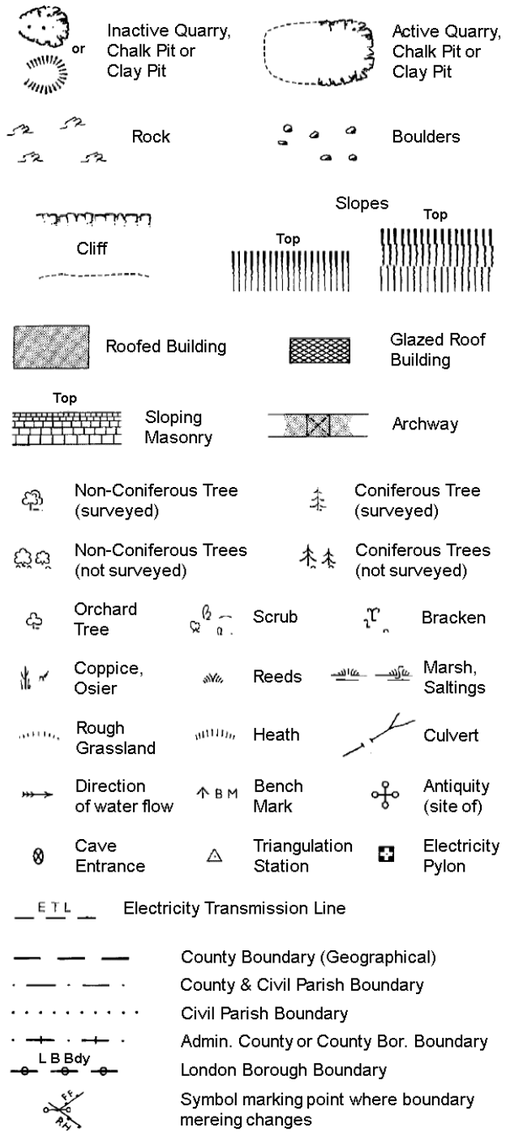
Administrative County & Civil Parish Boundary

Co. Boro. Bdy. County Borough Boundary (England)

Co. Burgh Bdy. County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)

County & Civil Parish Boundary

Civil Parish Boundary

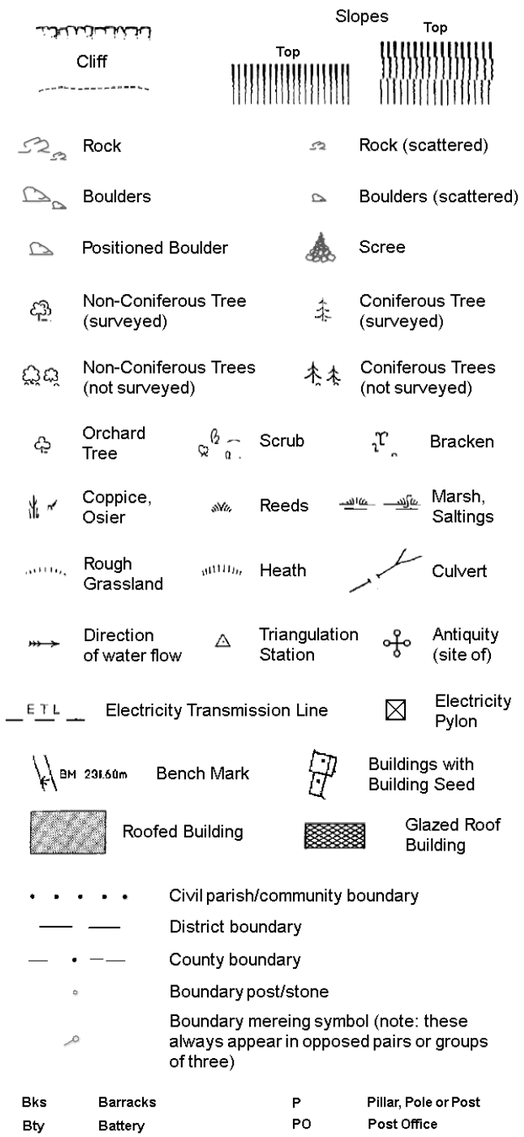
Admin. County or County Bor. Boundary

L B Bdy London Borough Boundary

Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary

District boundary

County boundary

Boundary post/stone

Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

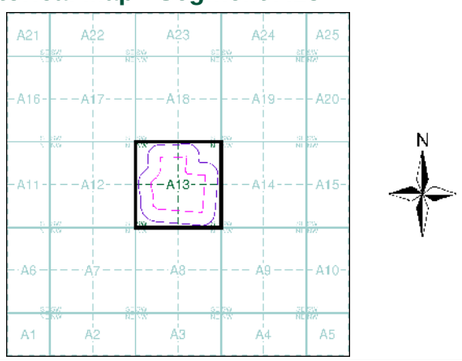
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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Monmouthshire	1:2,500	1883	2
Monmouthshire	1:2,500	1901	3
Monmouthshire	1:2,500	1921	4
Ordnance Survey Plan	1:1,250	1967	5
Ordnance Survey Plan	1:2,500	1968	6
Supply of Unpublished Survey Information	1:1,250	1974	7
Additional SIMs	1:1,250	1986	8
Additional SIMs	1:1,250	1991	9
Large-Scale National Grid Data	1:1,250	1992	10
Large-Scale National Grid Data	1:1,250	1995	11
Historical Aerial Photography	1:2,500	2001	12

Historical Map - Segment A13



Order Details

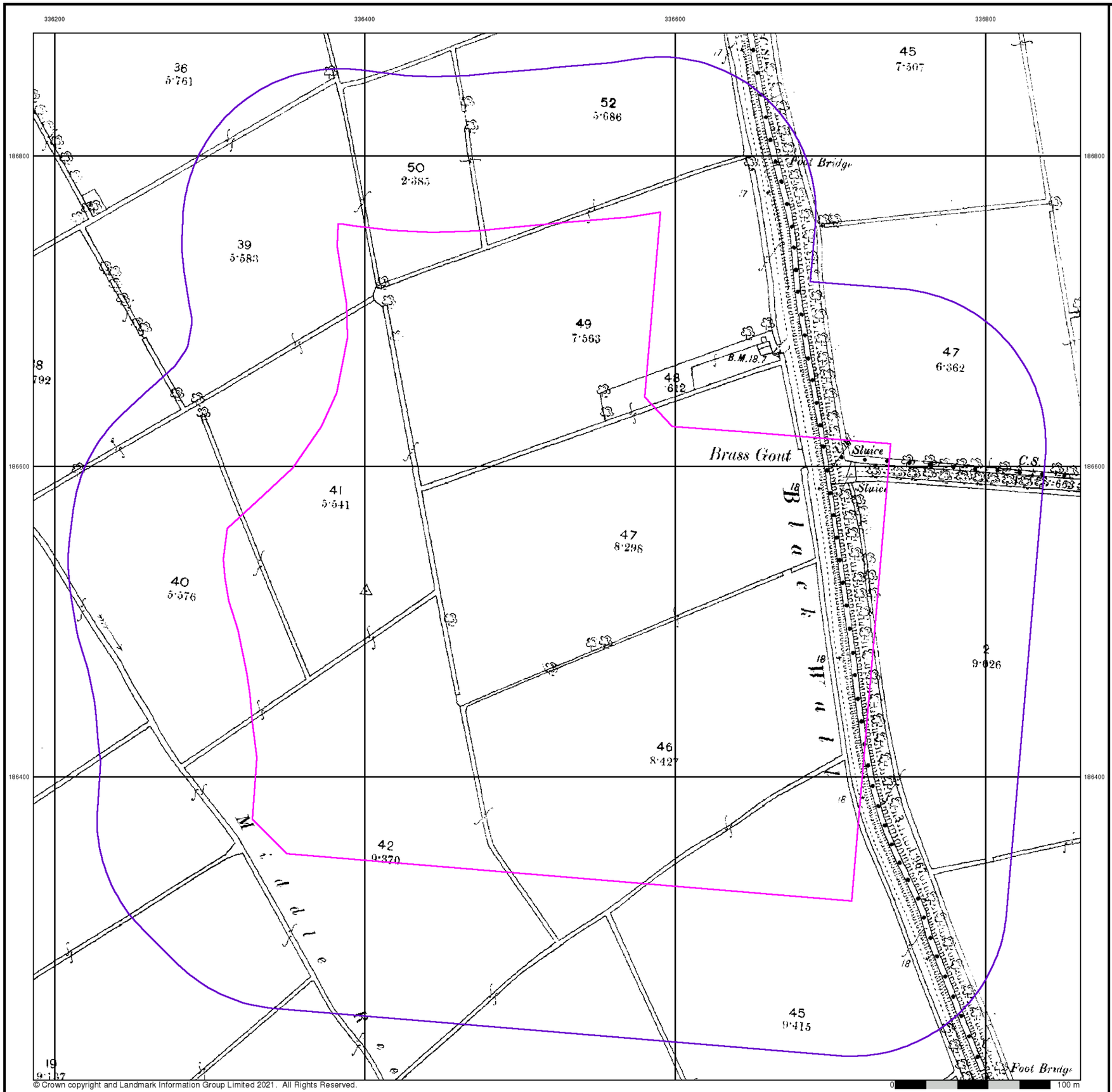
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

Site Details

Site at 336524,186542

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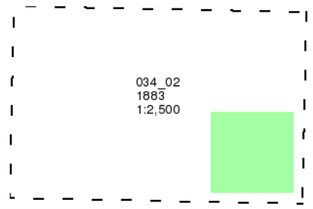
Monmouthshire

Published 1883

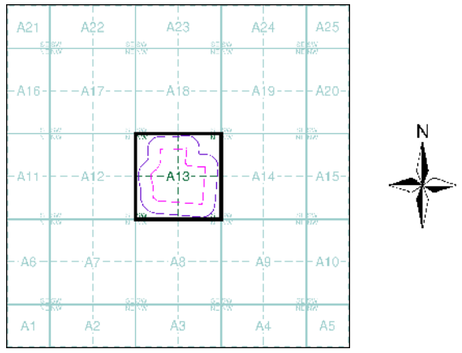
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

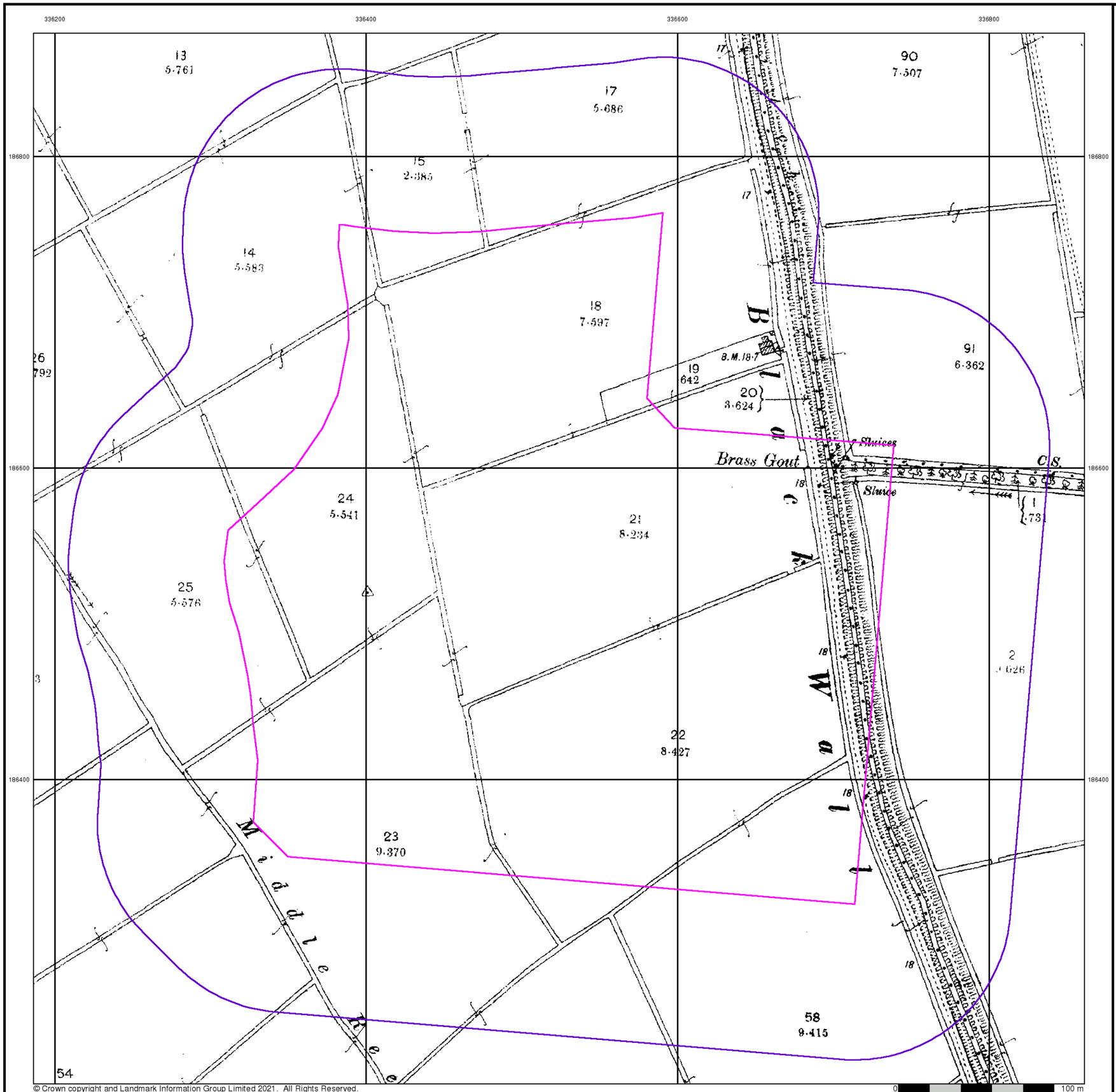
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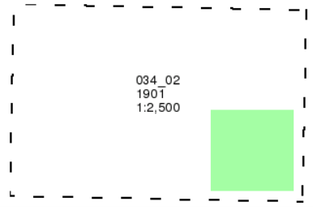
Monmouthshire

Published 1901

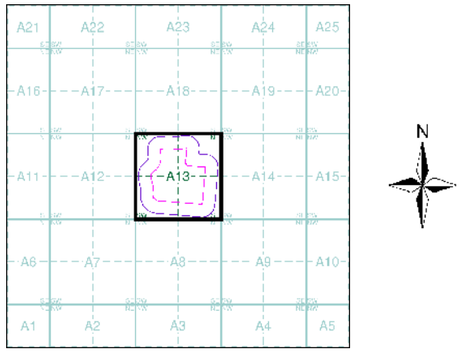
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

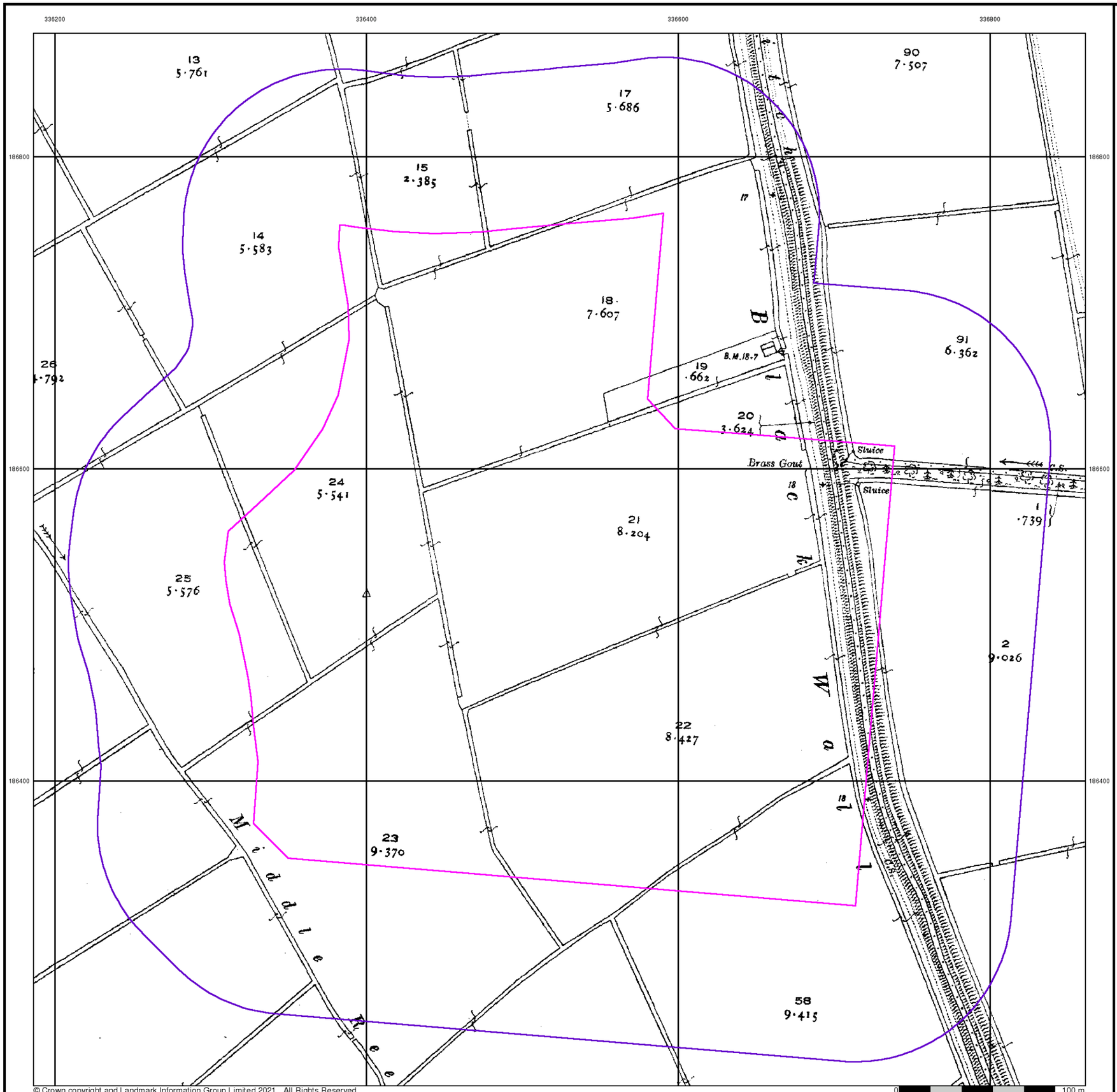
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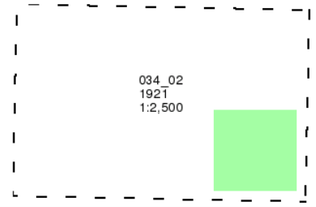
Monmouthshire

Published 1921

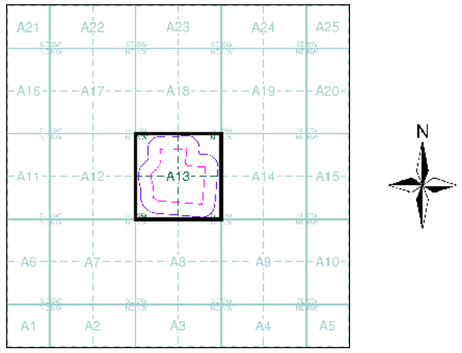
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



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Ordnance Survey Plan

Published 1967

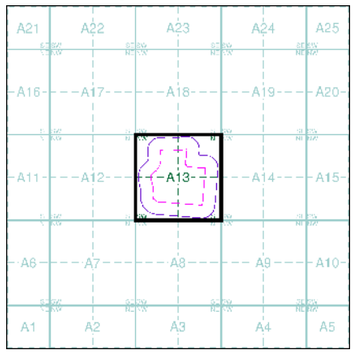
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

ST3686NW 1967 1:1,250	ST3686NE 1967 1:1,250
ST3686SW 1967 1:1,250	ST3686SE 1967 1:1,250

Historical Map - Segment A13



Order Details

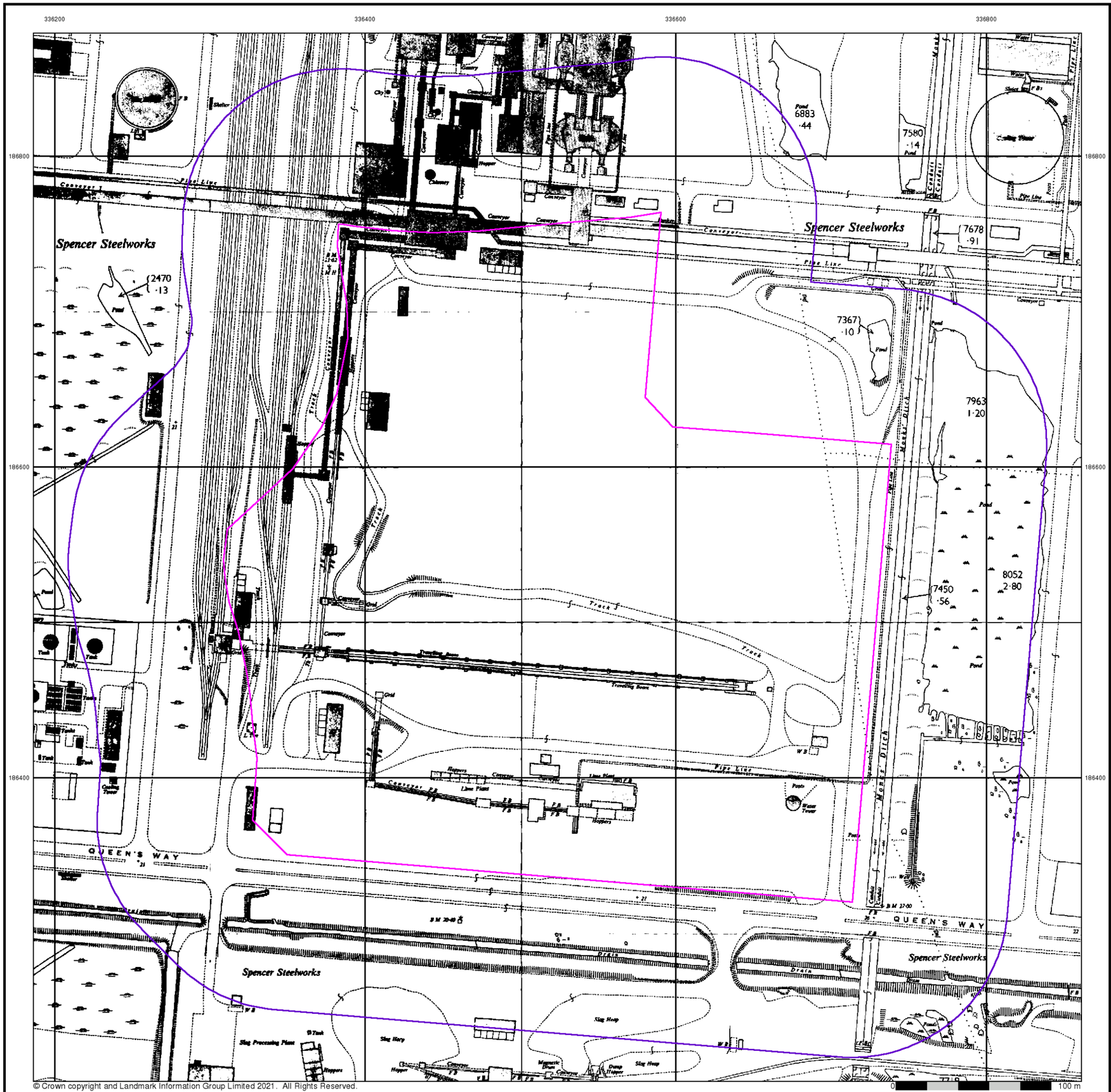
Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

Site Details

Site at 336524,186542

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Ordnance Survey Plan

Published 1968

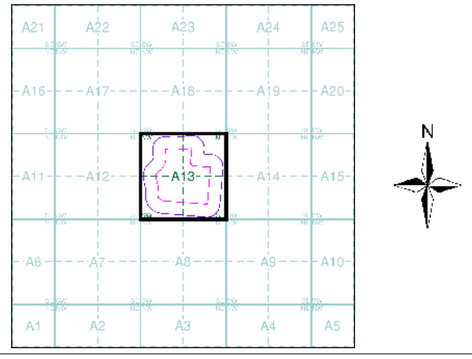
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

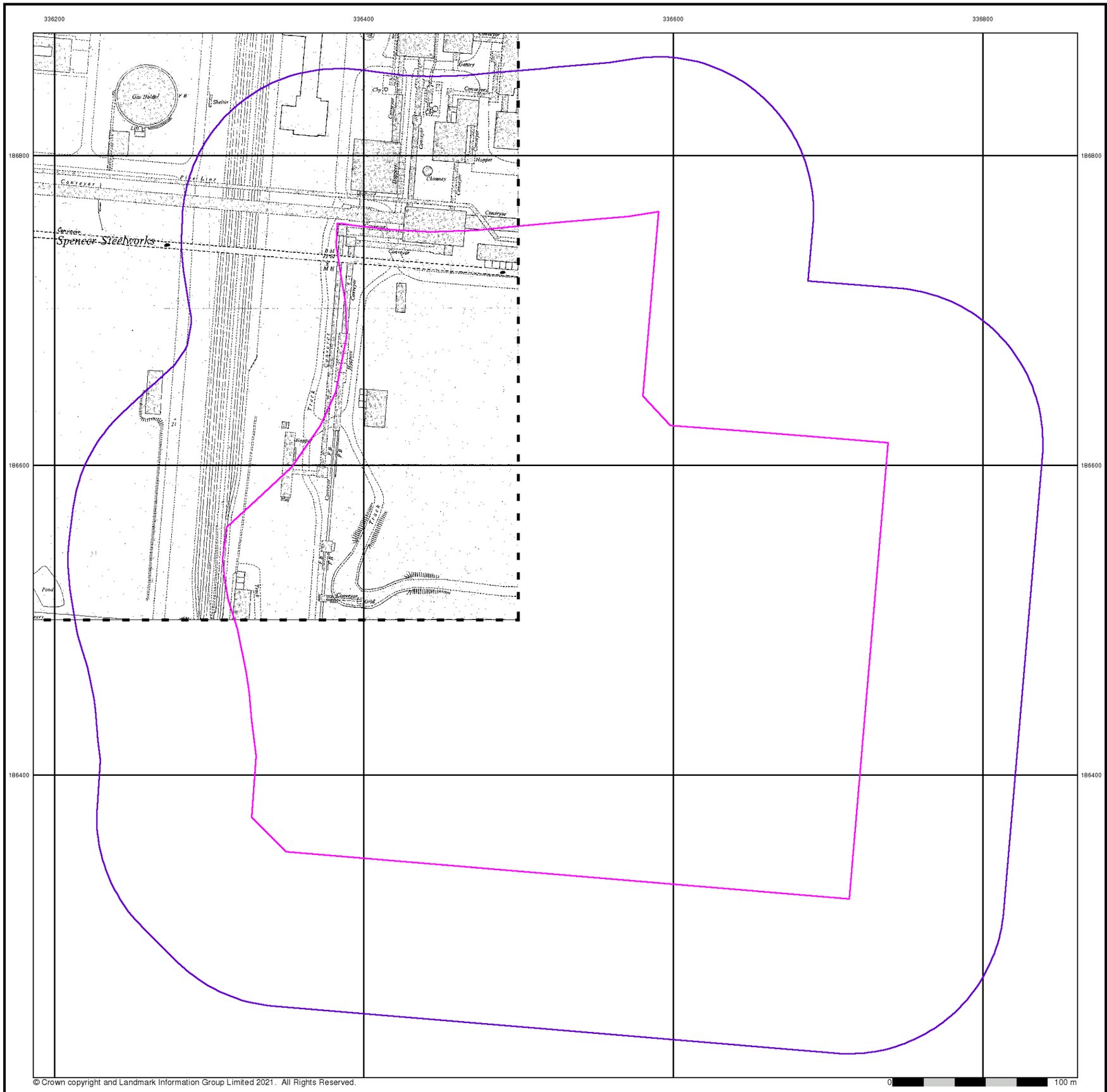
Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

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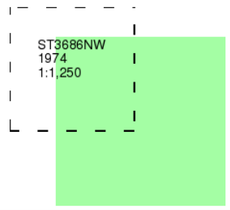
Supply of Unpublished Survey Information

Published 1974

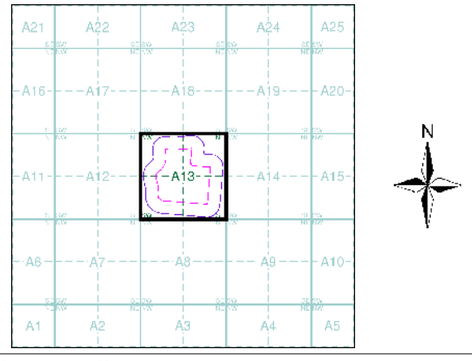
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

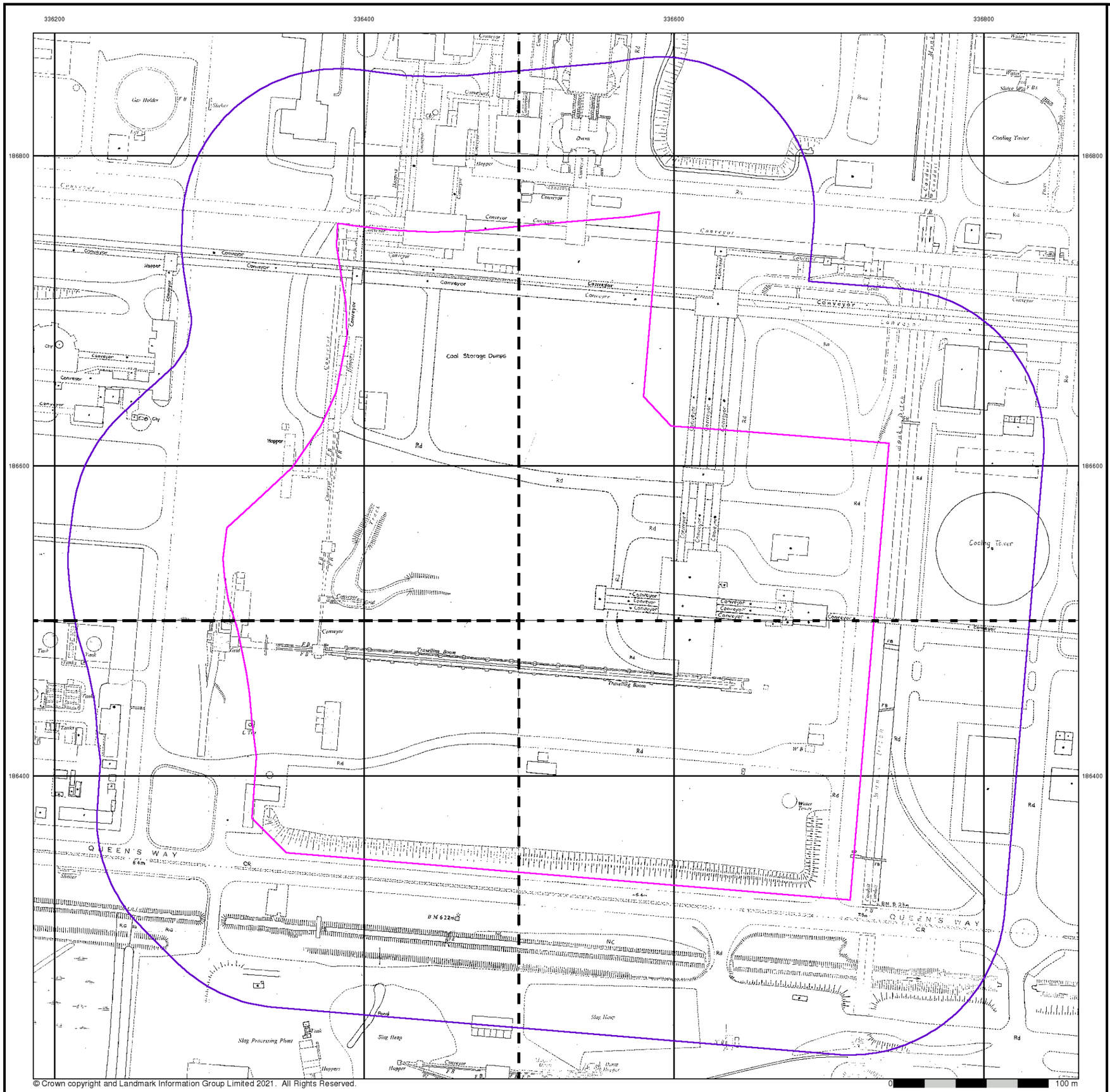
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

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Additional SIMs

Published 1986

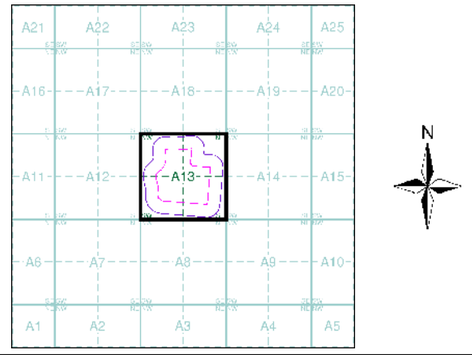
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

ST3686NW 1986 1:1,250	ST3686NE 1986 1:1,250
ST3686SW 1986 1:1,250	ST3686SE 1986 1:1,250

Historical Map - Segment A13



Order Details

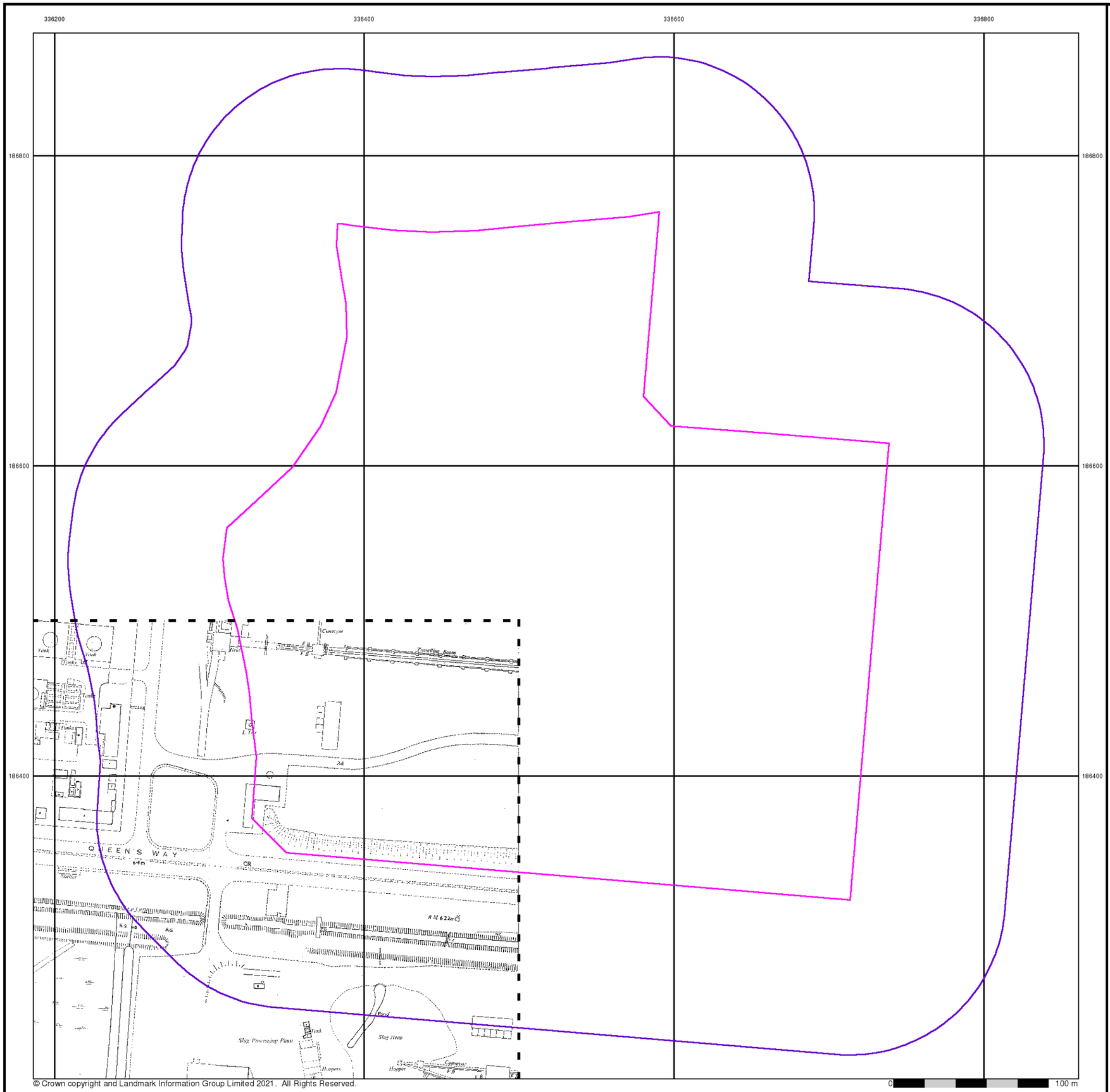
Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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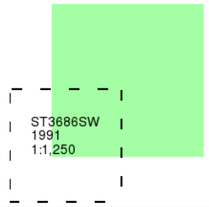
Additional SIMs

Published 1991

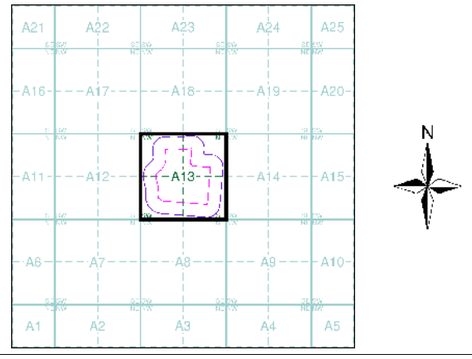
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

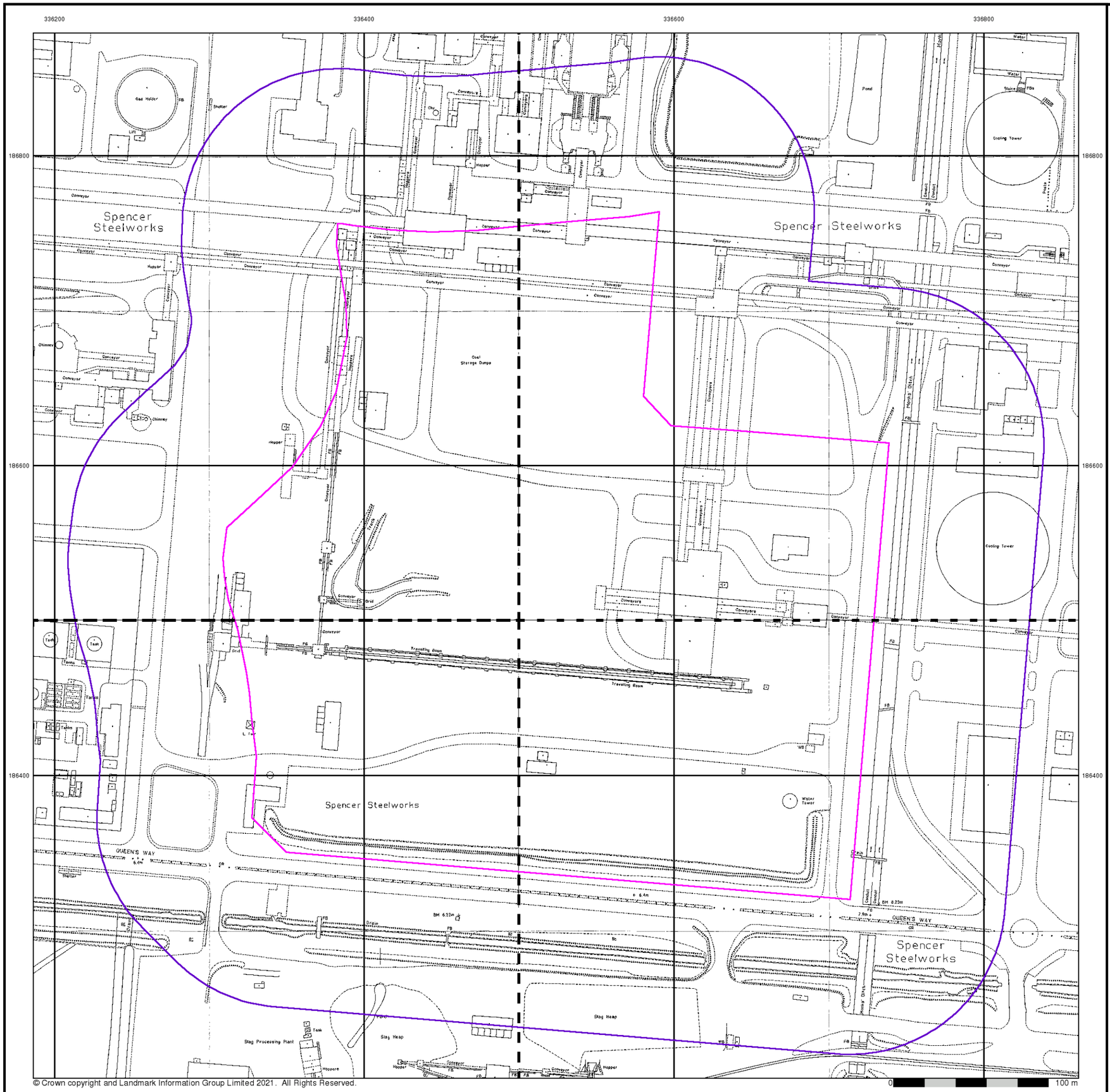
Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

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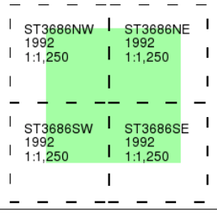
Large-Scale National Grid Data

Published 1992

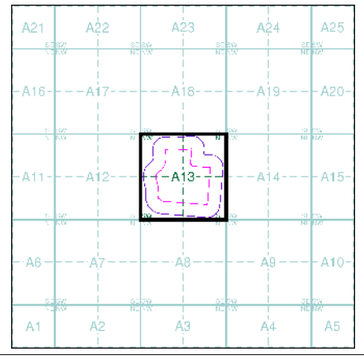
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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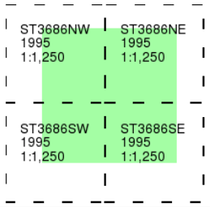
Large-Scale National Grid Data

Published 1995

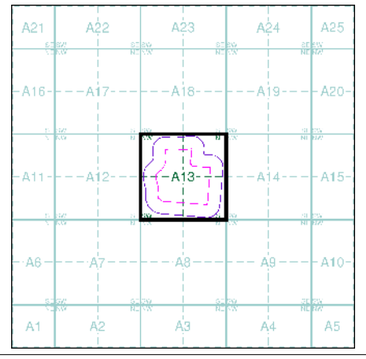
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

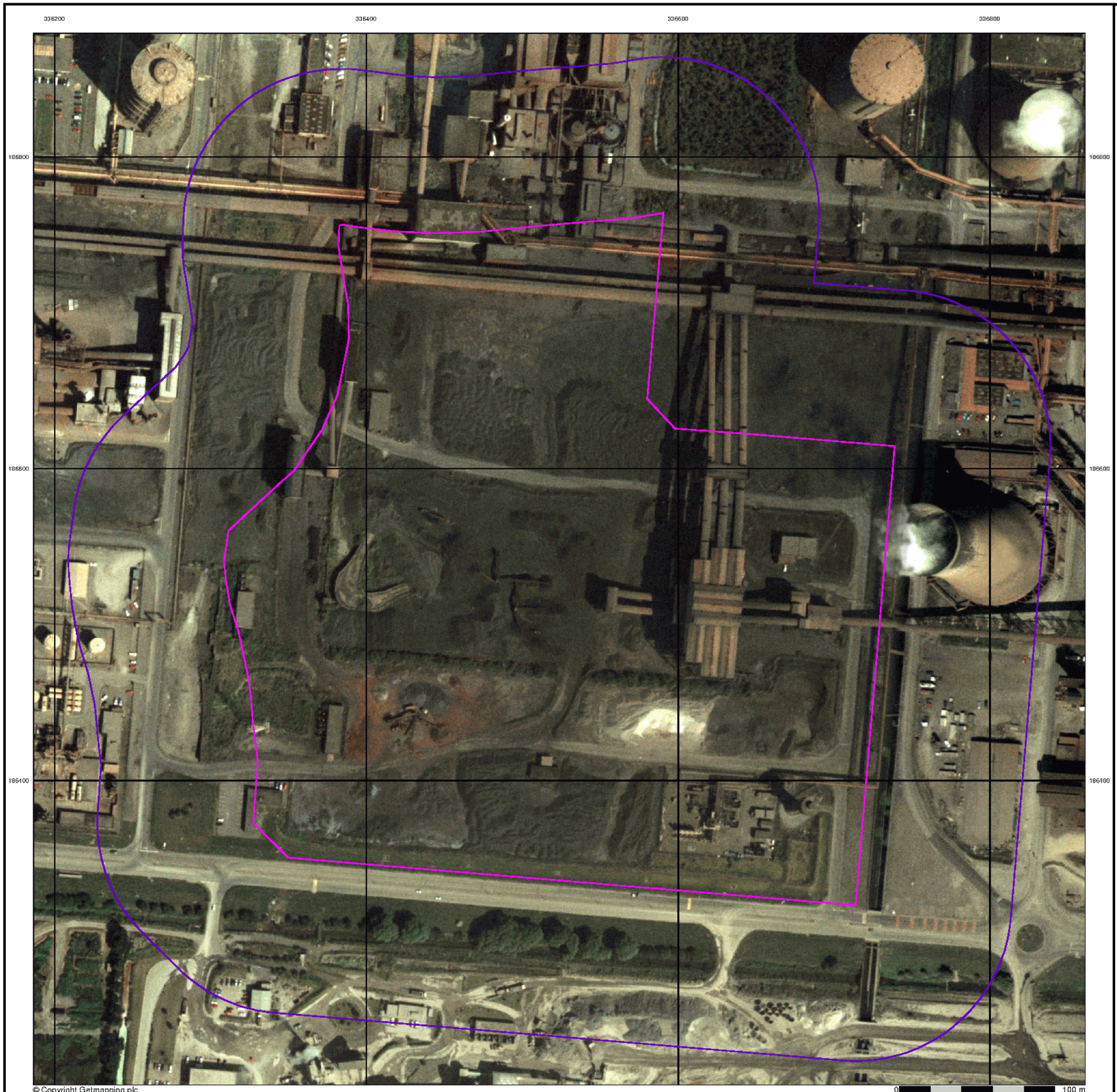
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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	100

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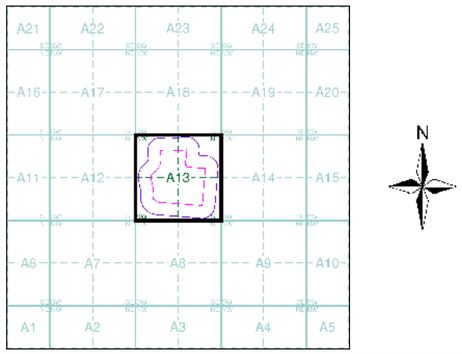
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Historical Aerial Photography

Published 2001

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

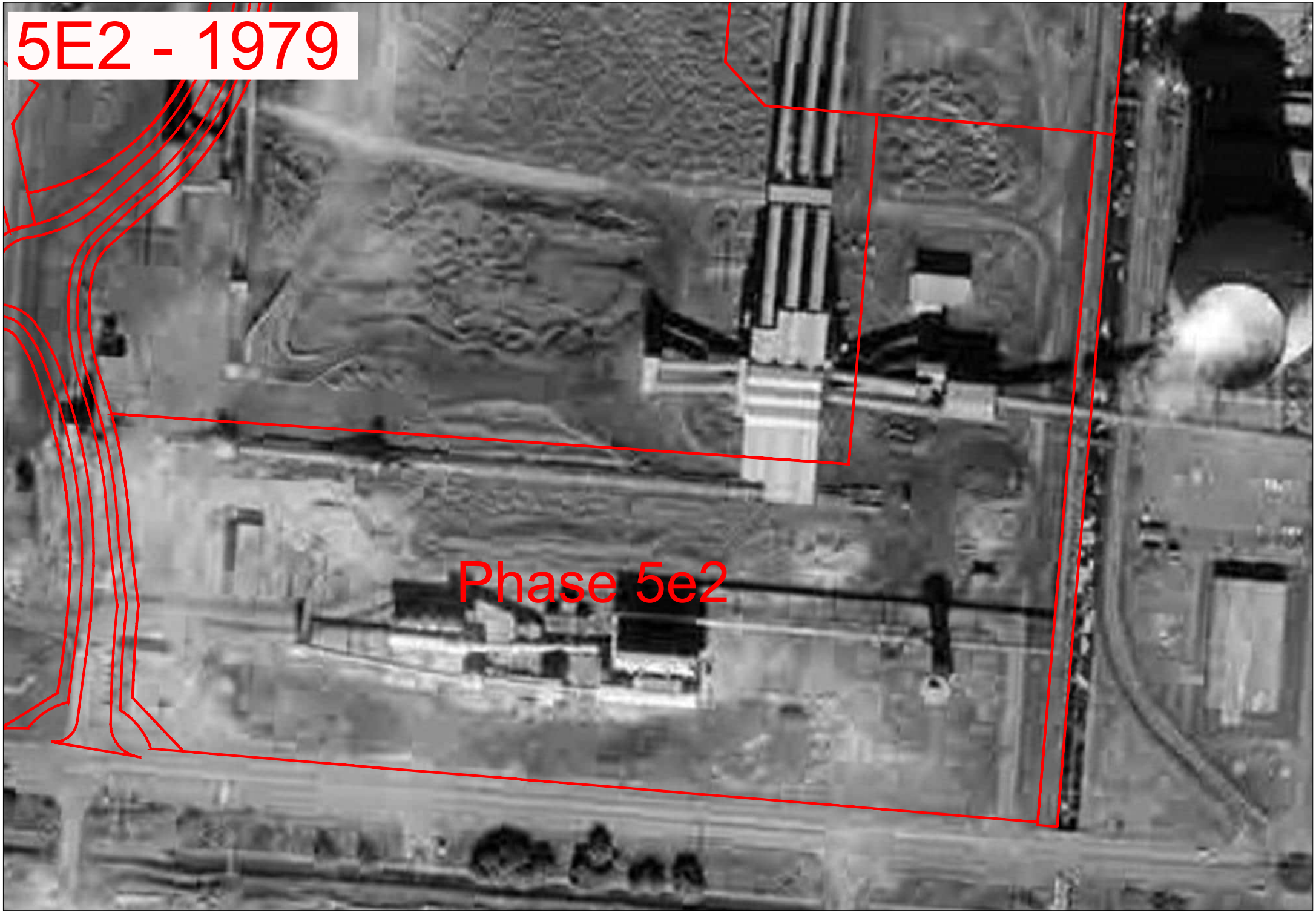
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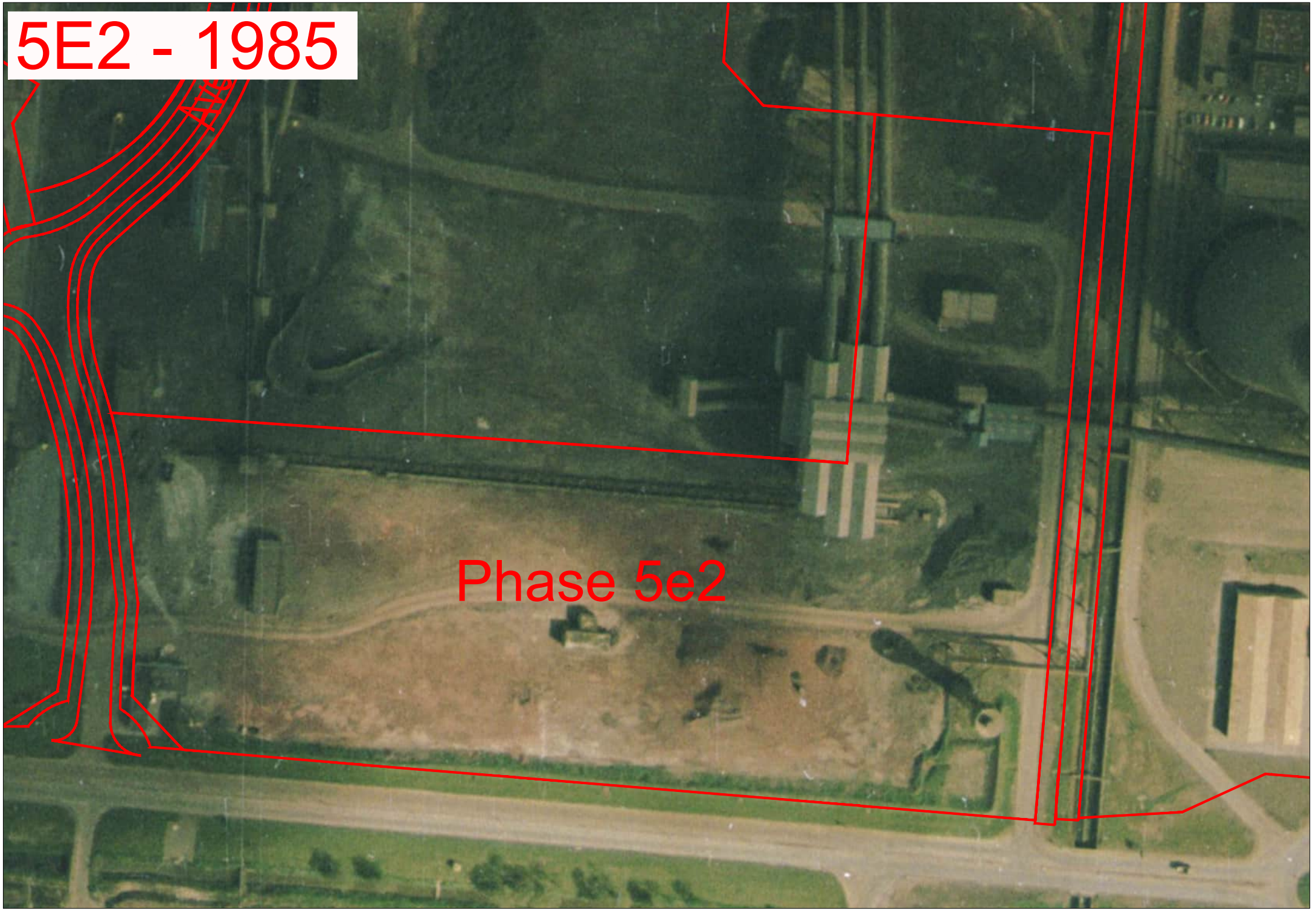
Site Details

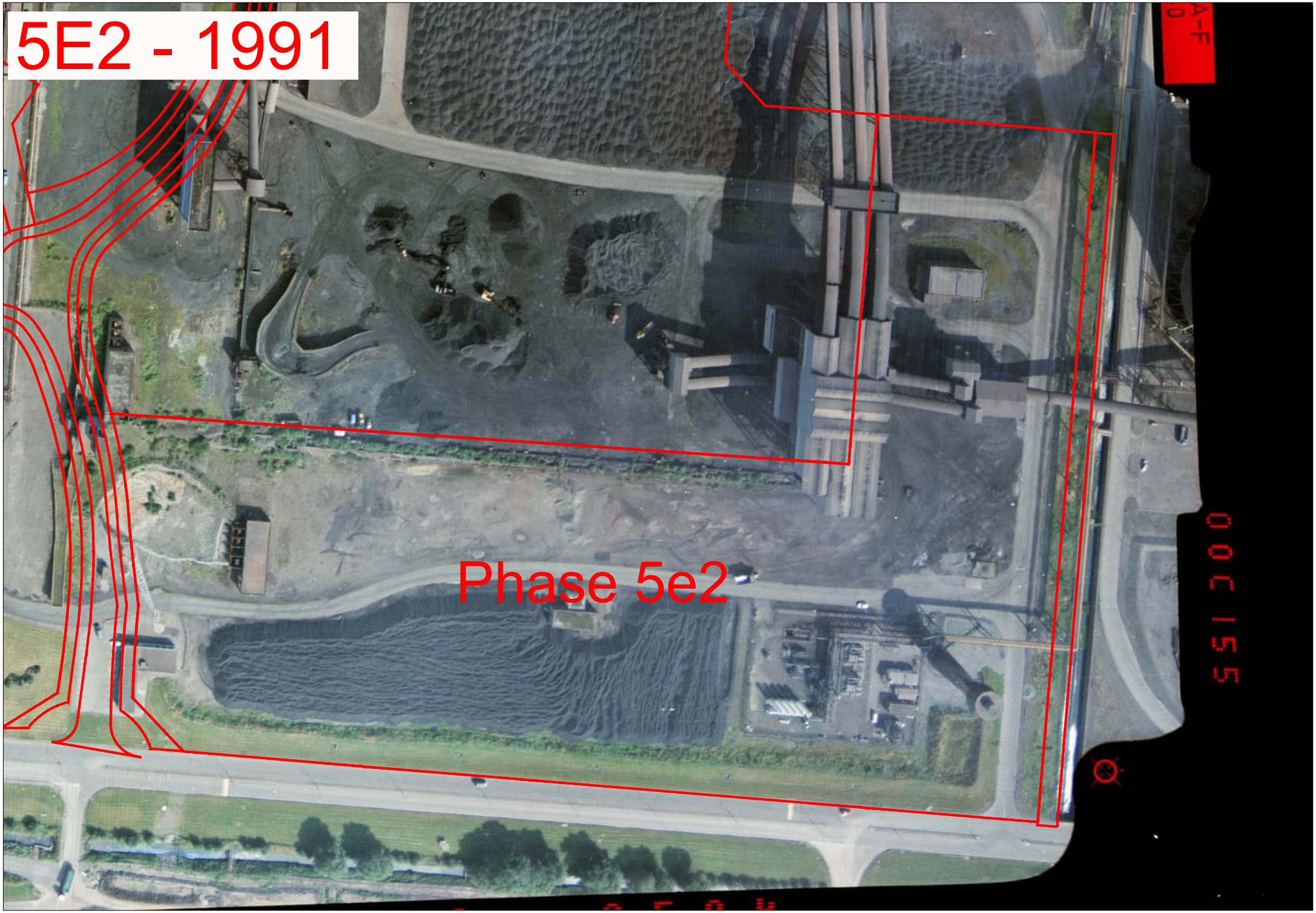
Site at 336524,186542

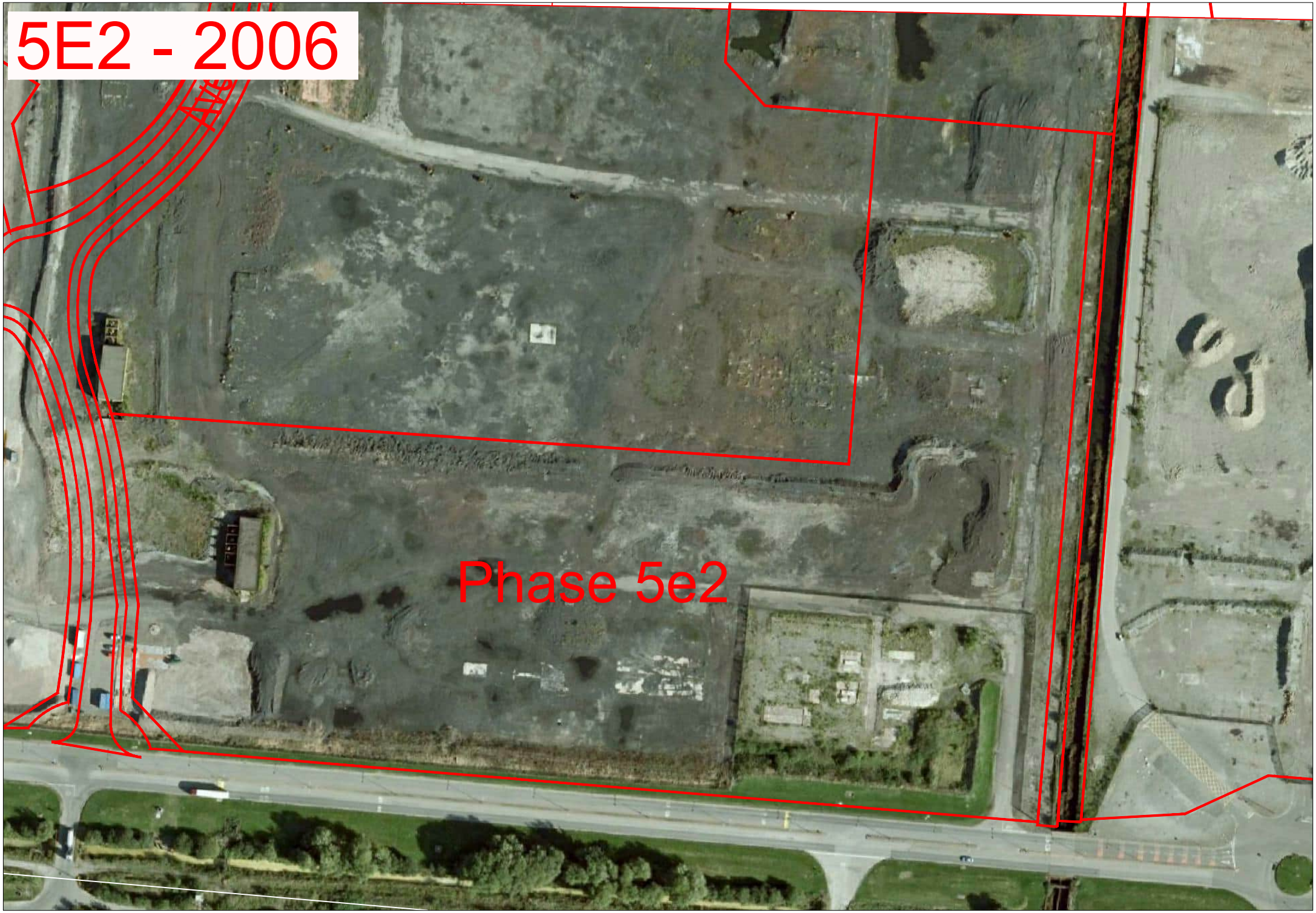
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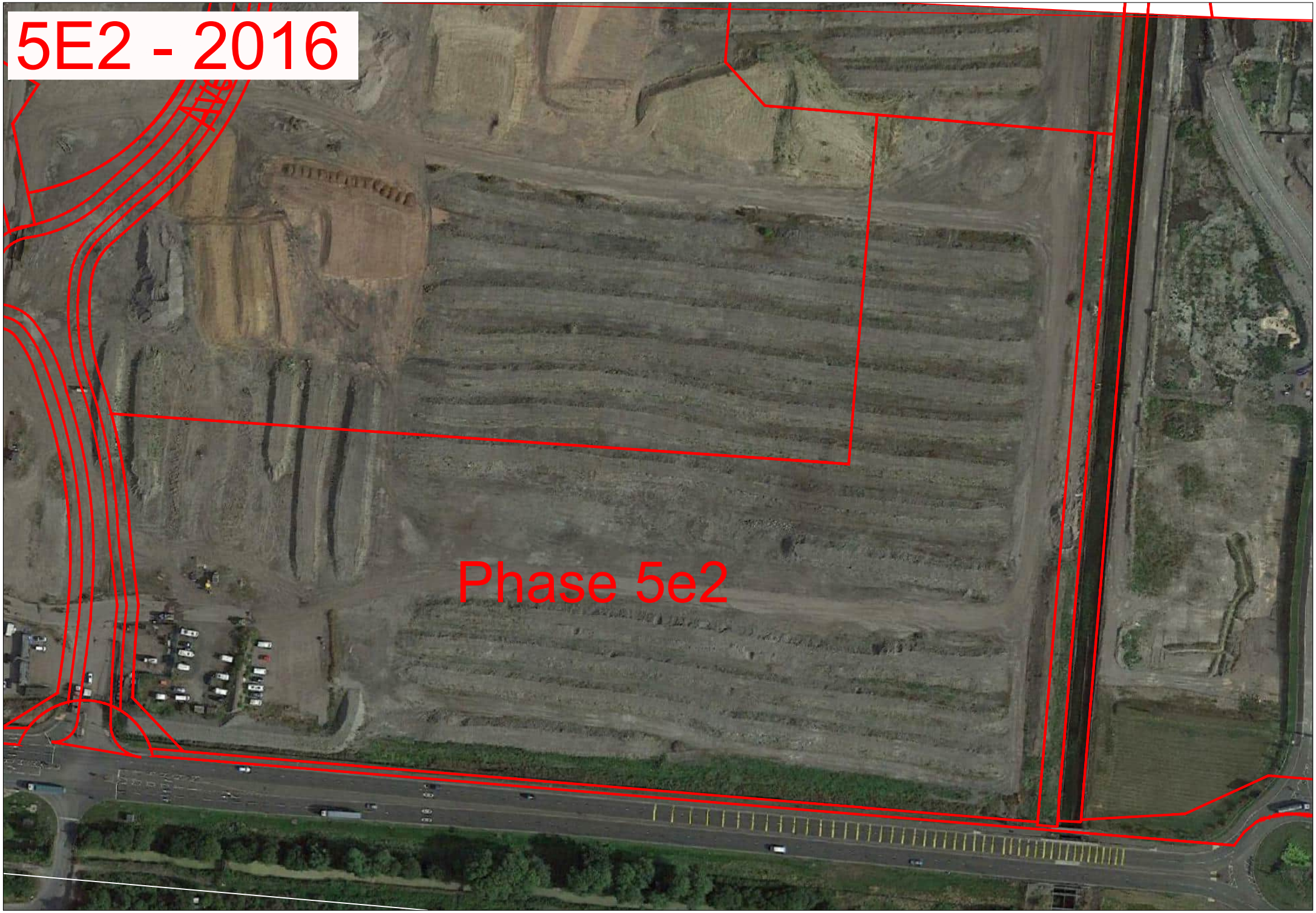
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Web: www.envirocheck.co.uk


5E2 - 1979
Phase 5e2


5E2 - 1985
Phase 5e2


5E2 - 1991
Phase 5e2

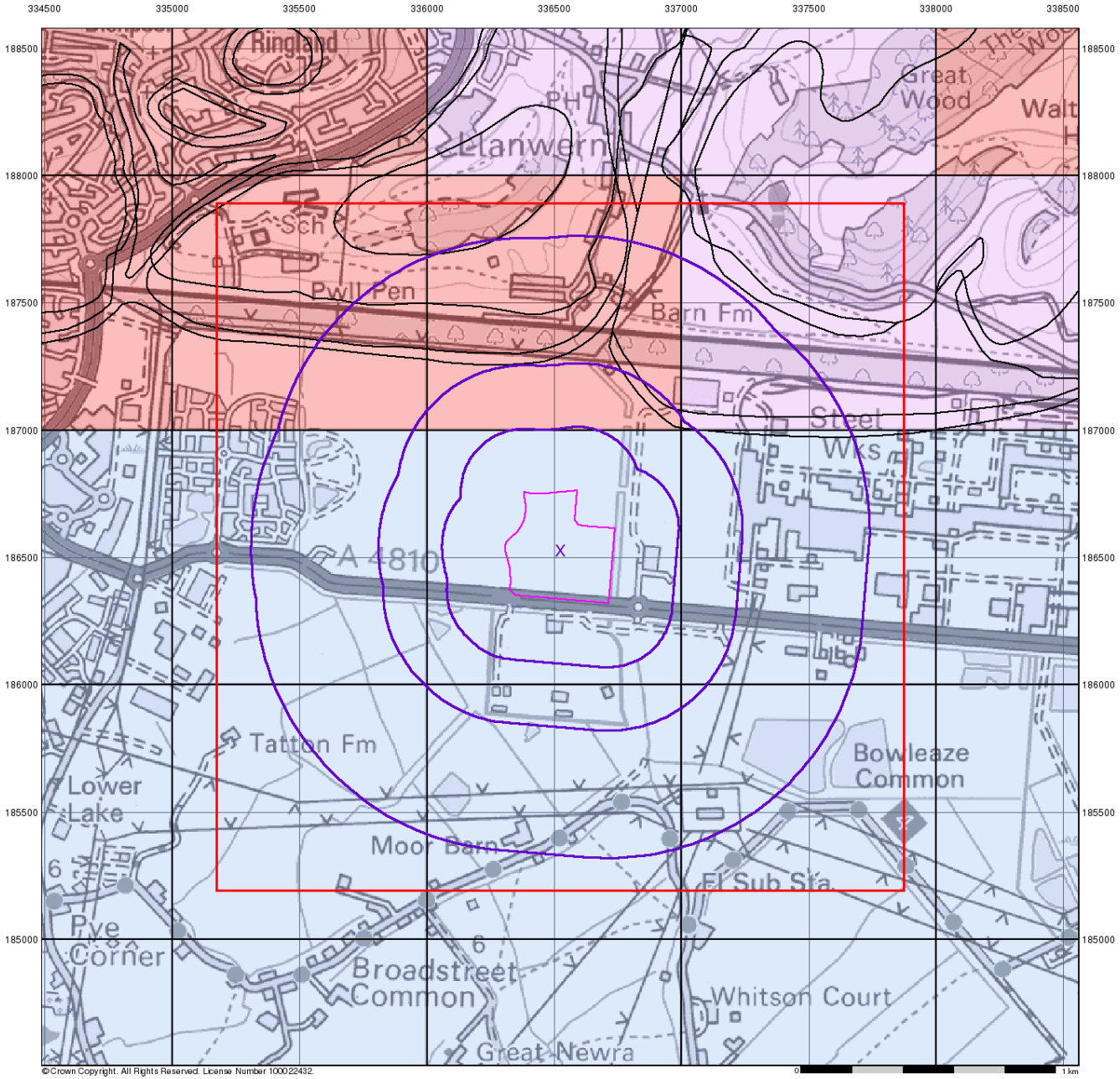

5E2 - 2006
Phase 5e2


5E2 - 2016
Phase 5e2


5E2 - 2018
Phase 5e2


5E2 - 2021
Phase 5e2

Appendix D
Envirocheck Report



Envirocheck

LANDMARK INFORMATION GROUP

Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

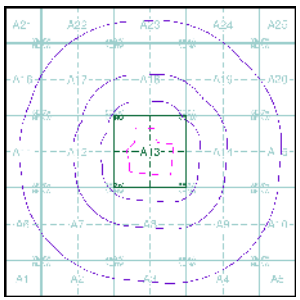
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



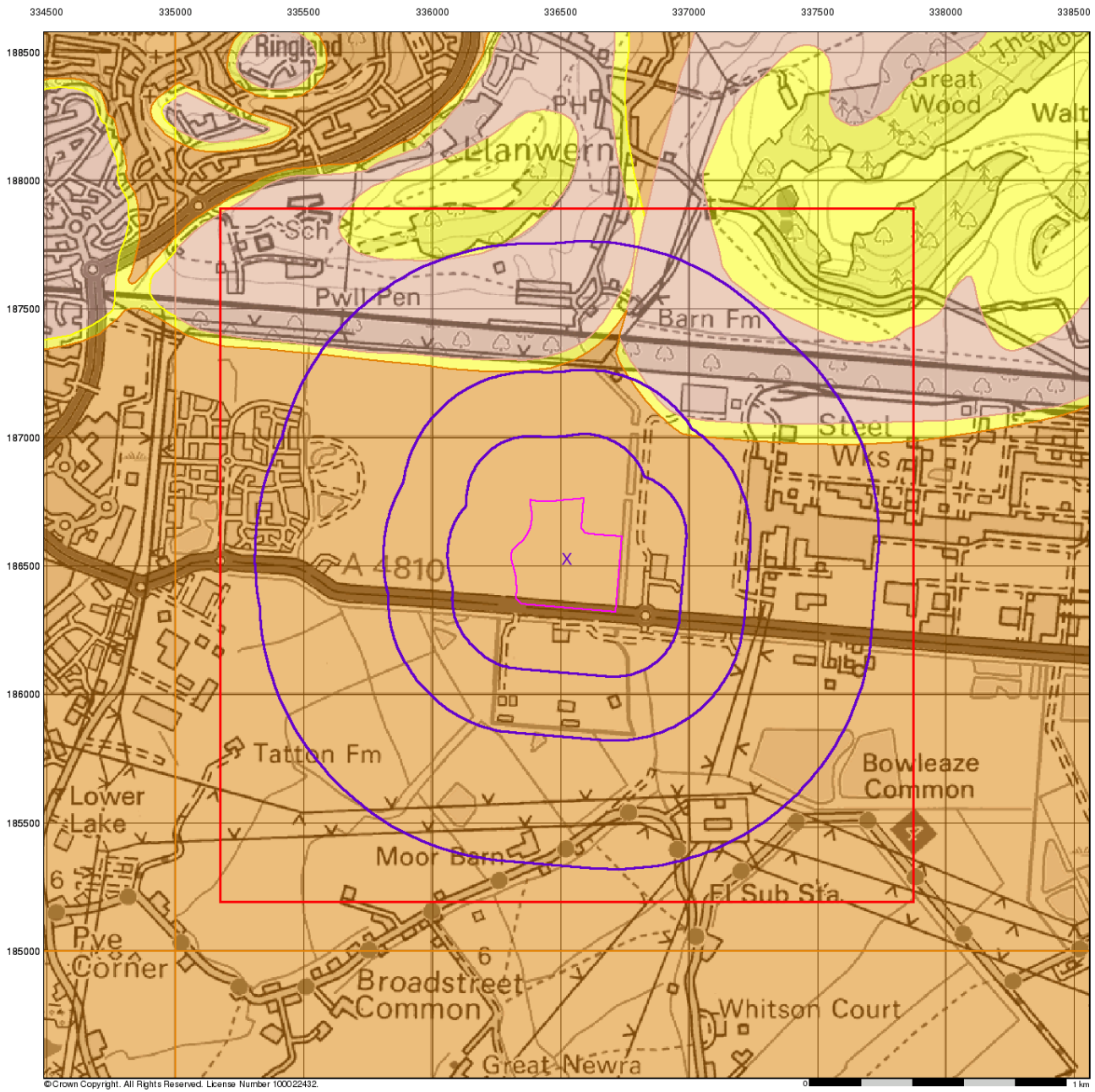
Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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Bedrock Aquifer Designation

General

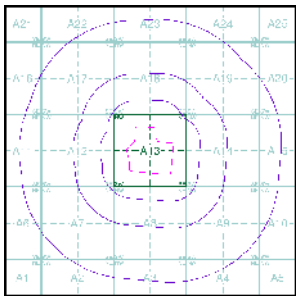
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



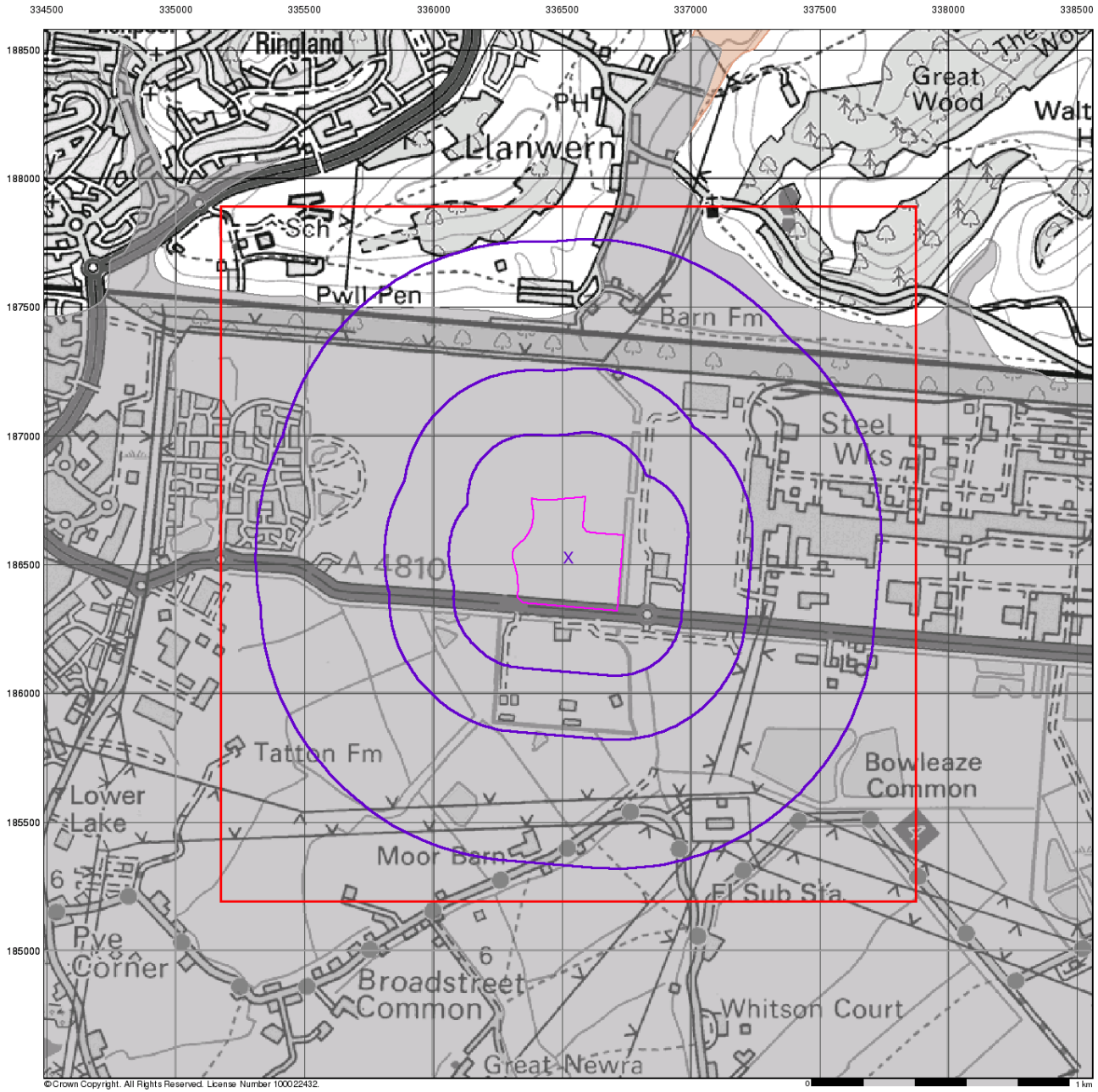
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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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Site Details

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Superficial Aquifer Designation

General

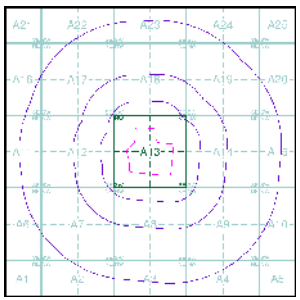
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



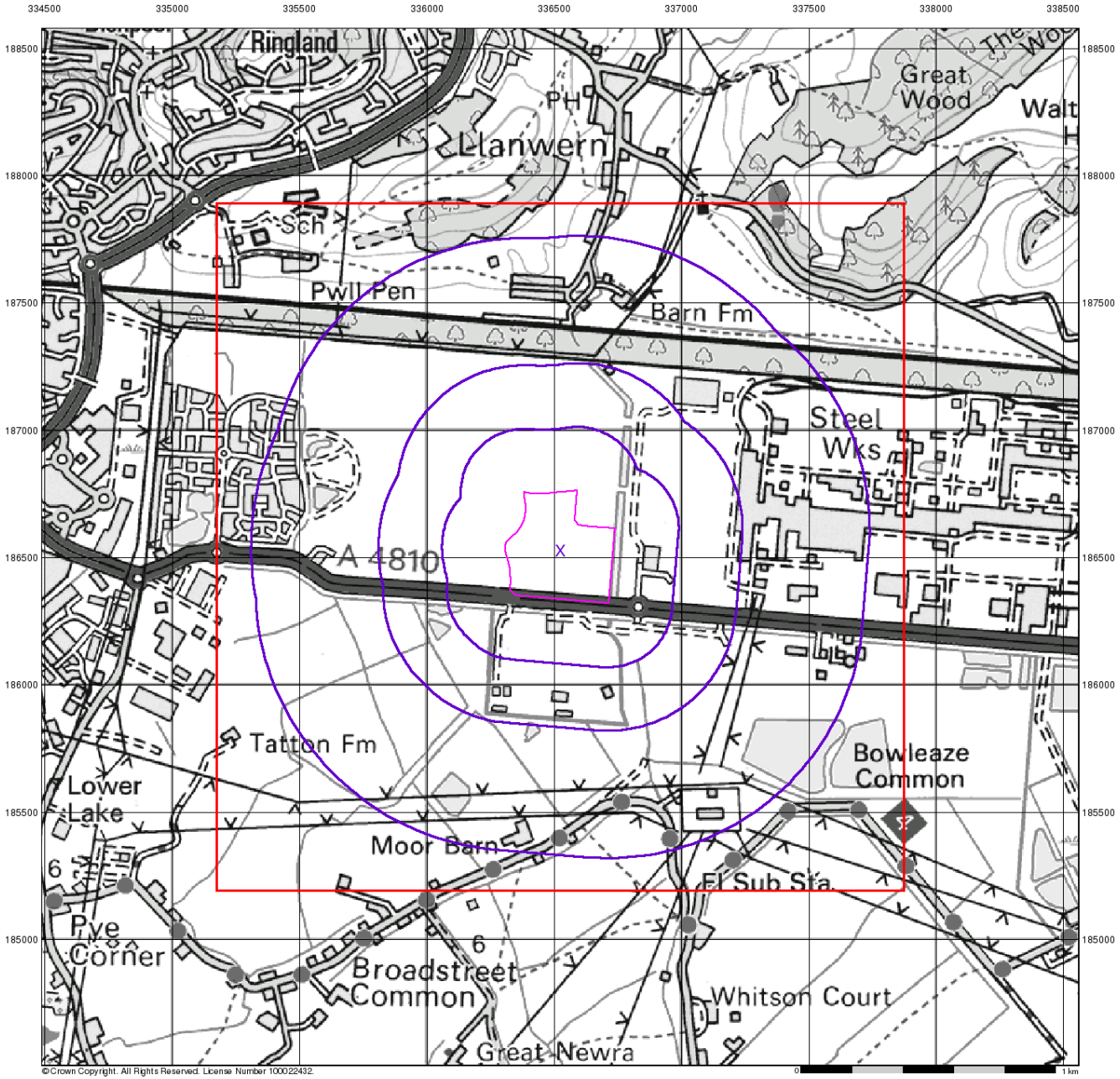
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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
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Source Protection Zones

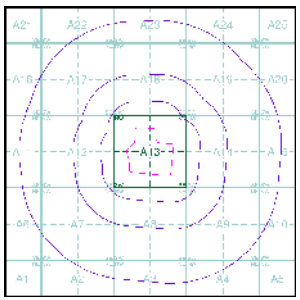
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



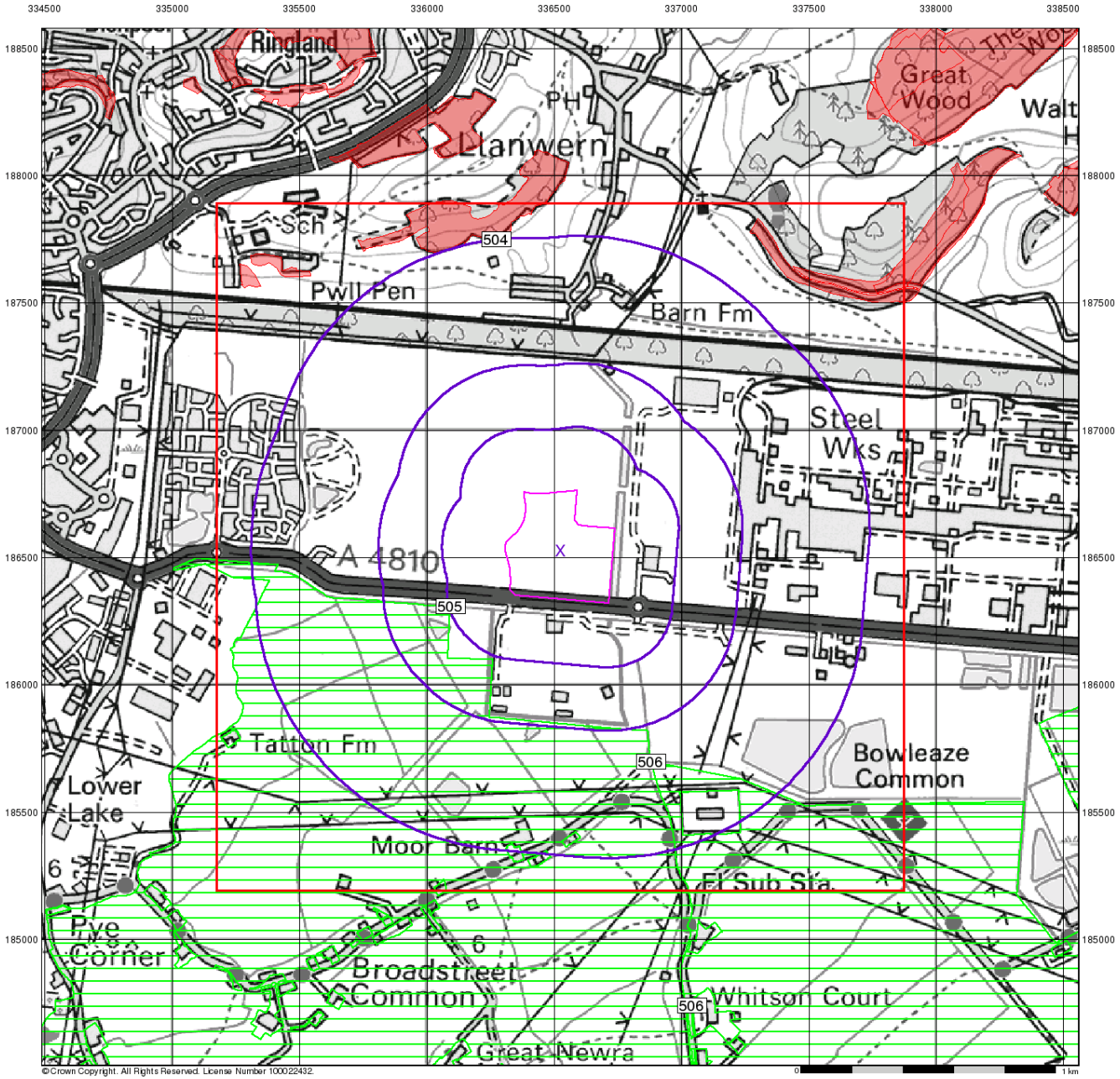
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

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Sensitive Land Uses

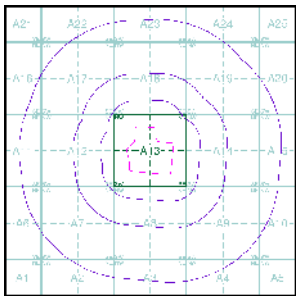
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



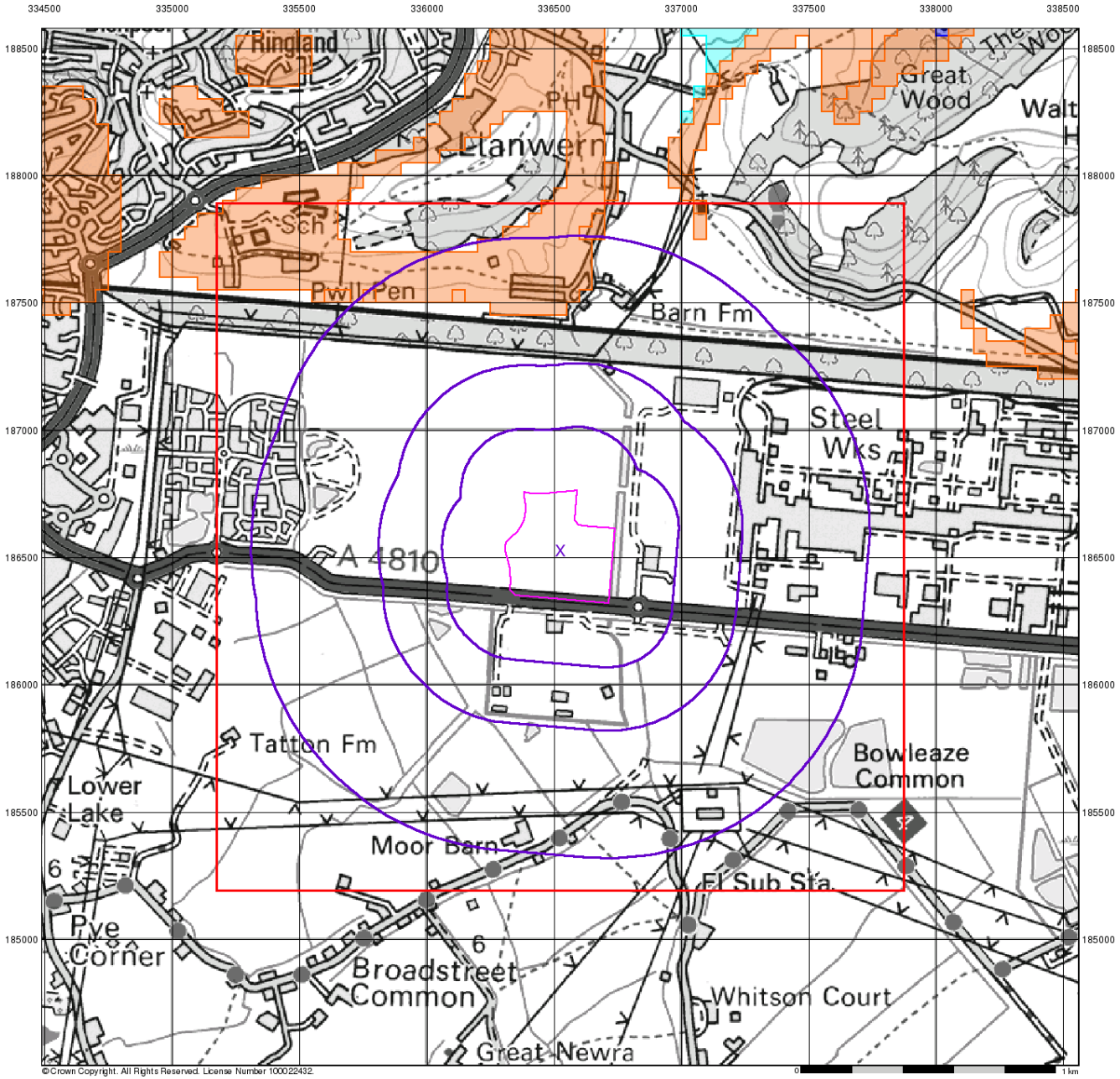
Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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BGS Flood GFS Data

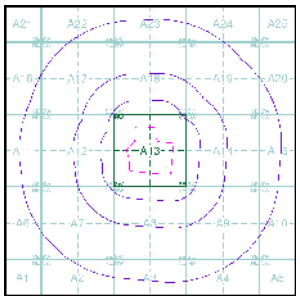
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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Tel: 0844 844 9952
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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
287158115_1_1

Customer Reference:
P18-669 5e1/5e2

National Grid Reference:
336530, 186530

Slice:
A

Site Area (Ha):
14.1

Search Buffer (m):
1000

Site Details:

Site at 336524,186542

Client Details:

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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility					n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 1			11	9
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices	pg 6				4
Integrated Pollution Controls	pg 6		4		21
Integrated Pollution Prevention And Control	pg 10				3
Local Authority Integrated Pollution Prevention And Control	pg 10			3	
Local Authority Pollution Prevention and Controls	pg 11			6	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 11		Yes		
Pollution Incidents to Controlled Waters					
Prosecutions Relating to Authorised Processes	pg 12				1
Registered Radioactive Substances	pg 12				3
River Quality	pg 12	1			2
River Quality Biology Sampling Points	pg 13				2
River Quality Chemistry Sampling Points	pg 14		1		
Substantiated Pollution Incident Register					
Water Abstractions					
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 14	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 14	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 15	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 18	Yes	Yes	n/a	n/a
Areas Benefiting from Flood Defences	pg 22	Yes	Yes	n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 24		18	33	305

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)	pg 64		1		
Licensed Waste Management Facilities (Locations)	pg 64				4
Local Authority Landfill Coverage	pg 65	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 65				1
Potentially Infilled Land (Water)	pg 65	1	1	2	7
Registered Landfill Sites	pg 65				1
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites	pg 66		1		
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)	pg 67	1			3
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)	pg 67		1		
Planning Hazardous Substance Consents	pg 67		1		2
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 68	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 68	Yes		Yes	Yes
BGS Recorded Mineral Sites	pg 69		1	1	
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas			n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards				n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 69	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 69	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 69	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 69	Yes		n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 70		2	2	5
Fuel Station Entries					
Points of Interest - Commercial Services					
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 70	2	36	42	125
Points of Interest - Public Infrastructure	pg 87		3	9	12
Points of Interest - Recreational and Environmental	pg 89				5
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Underground Electrical Cables	pg 90				13

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
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Ancient Woodland	pg 92				1
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Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest	pg 92		1		1
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks - Power Pl Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ac0098801 Permit Version: 1 Effective Date: 11th July 1975 Issued Date: 11th July 1975 Revocation Date: 7th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (E)	333	2	337060 186700
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034302 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034303 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034304 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034305 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034306 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850
2	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Filter Uni Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034307 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Numbwer 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	383	2	337040 186850
3	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern - Steelworks Blast Furnace, Blast Furnaces Lagoon Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ac0099001 Permit Version: 1 Effective Date: 20th August 1975 Issued Date: 20th August 1975 Revocation Date: 7th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 4 **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A18SW (N)	452	2	336300 187200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hood & Lan Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034301 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	472	2	337060 186960
4	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hood & Lan Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034308 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	472	2	337060 186960
4	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hood & Lan Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034310 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 5 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	472	2	337060 186960
5	**Discharge Consents** Operator: Llanwern Community Council Property Type: Undefined Or Other Location: Tennyson Avenue, Llanwern, Newport Authority: Natural Resources Wales Catchment Area: Monks Ditch Reference: An0218901 Permit Version: 2 Effective Date: 10th September 1990 Issued Date: 10th September 1990 Revocation Date: 20th November 1992 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Monksditch **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A18NE (N)	668	2	336550 187430

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
6	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Oxygen Pla Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034322 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: East-West Ditch **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A9NE (E)	730	2	337430 186180
7	**Discharge Consents** Operator: Llanwern Community Council Property Type: Undefined Or Other Location: Tennyson Avenue, Llanwern, Newport Authority: Natural Resources Wales Catchment Area: Monks Ditch Reference: An0218901 Permit Version: 1 Effective Date: 1st January 1901 Issued Date: 1st January 1901 Revocation Date: 9th September 1990 Discharge Type: Unspecified Discharge Environment: Freshwater Stream/River Receiving Water: Monksditch **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A18NW (N)	742	2	336500 187500
8	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hot Mill C Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034311 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 6 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	744	2	337470 186750
8	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hot Mill C Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034312 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 6 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	744	2	337470 186750

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
8	**Discharge Consents** Operator: British Steel Corporation Property Type: Undefined Or Other Location: Llanwern Steelworks-Hot Mill C Authority: Natural Resources Wales Catchment Area: Llanwern Outfall Reference: Ab0034313 Permit Version: 1 Effective Date: 15th February 1963 Issued Date: 15th February 1963 Revocation Date: 6th March 1986 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Stream Number 6 **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A14NE (E)	744	2	337470 186750
9	**Discharge Consents** Operator: National Grid Plc Property Type: Production & Distribution Of Electricity Location: Whitson 400/275kv Substation Nash, Broadc Street Common, Newport Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0335901 Permit Version: 1 Effective Date: 3rd July 2003 Issued Date: 3rd July 2003 Revocation Date: 8th November 2010 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: The Caldicot Level Reen System **Status: Revoked under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A9SW (SE)	832	2	336997 185538
10	**Discharge Consents** Operator: Alan R Jones & Sons Ltd Property Type: Miscellaneous Transport Not Specified Location: 'Decoypool' Nash Newport Authority: Natural Resources Wales Catchment Area: Not Given Reference: AN0228101 Permit Version: 1 Effective Date: 23rd March 1992 Issued Date: 23rd March 1992 Revocation Date: 28th June 2002 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Chapel Reen **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A3NE (S)	918	2	336580 185410
11	**Discharge Consents** Operator: National Grid Plc Property Type: Production & Distribution Of Electricity Location: Whitson 400/275kv Substation Nash, Broad Street Common, Newport Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: An0335902 Permit Version: 1 Effective Date: 3rd July 2003 Issued Date: 3rd July 2003 Revocation Date: 8th November 2010 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: The Caldicot Level Reen System **Status: Revoked under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A9SE (SE)	945	2	337232 185530
12	**Prosecutions Relating to Controlled Waters** Location: Kress Garage, Spencer Works, NEWPORT, Gwent, NP9 Prosecution Text: EA Welsh Data 02/09/1999, Polluting Spytty Reen with waste oil. Offence committed 05/12/1994. Prosecution Act: WRA91 s85(1)(3) & s202 Hearing Date: 2nd August 1995 Verdict: Guilty Fine: 1000 Cost: 500 Positional Accuracy: Manually positioned within the geographical locality	A15NW (E)	882	3	337600 186800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
13	**Enforcement and Prohibition Notices** Location: Llanwern, NEWPORT, . Permit Reference: Not Given Enforcement Date: 5th October 2001 Details: Enforcement Notice - After Breaching Four Conditions Of Their Ipc Authorisation. This Included Releasing Around 1500 Cu/M Of Water Containing Hydrochloric Acid To The Severn Estuary On 18-09-01. Work To Be Carried Out On Systems, Maintenance And Training. Positional Accuracy: Manually positioned to the address or location	A14SE (E)	750	3	337484 186535
14	**Enforcement and Prohibition Notices** Location: Barn Farm, Station Road, Llanwern, NEWPORT, Gwent, NP6 2DW Permit Reference: SM85/99KC Enforcement Date: 19th March 1999 Details: EA News Release 19/03/1999, Consistent unauthorised waste activities following repeated warnings. Positional Accuracy: Manually positioned to the address or location	A18NE (N)	802	3	336736 187552
14	**Enforcement and Prohibition Notices** Location: Barn Farm, Station Road, Llanwern, NEWPORT, Gwent, NP6 2DW Permit Reference: SM85/99KC Enforcement Date: 19th March 1999 Details: EA Data 23/03/1999, Illegal tipping of controlled waste at farm premises, following long-standing complaints of unauthorised waste activities & flouting of repeated warnings from EA. First time Env. Act 1995 s37(1a) implemented for this purpose. Positional Accuracy: Manually positioned to the address or location	A23SE (N)	819	3	336733 187570
15	**Enforcement and Prohibition Notices** Location: Llanwern Works, NEWPORT, Gwent, NP9 0QX Permit Reference: Not Given Enforcement Date: 18th December 1995 Details: Press Release HM345, Failure to make required progress in providing a plant to treat liquid effluent for benzene and ammonia. Positional Accuracy: Unknown	A15NW (E)	880	3	337600 186790
16	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: BG4437 Dated: 12th October 1999 Process Type: IPC major (substantial) variation Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A13SW (S)	93	3	336430 186251
16	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: BD7006 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13SW (S)	93	3	336430 186251
16	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: AW7487 Dated: 23rd October 1996 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13SW (S)	93	3	336430 186251
16	**Integrated Pollution Controls** Name: Cambrian Stone Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: AD1925 Dated: 25th June 1992 Process Type: IPC new application Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A13SW (S)	93	3	336430 186251

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Integrated Pollution Controls** Name: Bitmac Ltd Location: Llanwern Works, Queensway, NEWPORT, Gwent, NP9 0QX Authority: Environment Agency, Welsh Region Permit Reference: BC3854 Dated: 5th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.2 A (A) Carbonisation and associated processes within the Fuel & Power Industry **Status: Application has met the requirements for authorisation (but not yet authorised)** Positional Accuracy: Manually positioned to the road within the address or location	A12SW (W)	576	3	335752 186384
17	**Integrated Pollution Controls** Name: Bitmac Ltd Location: Llanwern Works, Queensway, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: BG7746 Dated: 4th August 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.2 A (B) Carbonisation and associated processes within the Fuel & Power Industry **Status: Application has met the requirements for authorisation (but not yet authorised)** Positional Accuracy: Manually positioned to the road within the address or location	A12SW (W)	579	3	335747 186389
18	**Integrated Pollution Controls** Name: Multiserv (Asr) Ltd Location: British Steel Plc, Llanwern Works, NEWPORT, Gwent, NP9 0XN Authority: Environment Agency, Welsh Region Permit Reference: AY8255 Dated: 22nd October 1997 Process Type: IPC new application Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	651	3	337364 186795
18	**Integrated Pollution Controls** Name: Multiserv (Asr) Ltd Location: Integrated Works, - Llanwern, NEWPORT, Gwent, NP9 0XN Authority: Environment Agency, Welsh Region Permit Reference: BD9700 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (L) Iron and Steel processes within the Metal Industry **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	653	3	337364 186800
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: Bm1873 Dated: 25th October 2002 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Revoked - Now IPPC** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: Bj0323 Dated: 5th December 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: Bj3802 Dated: 13th September 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: Bi3580 Dated: 18th May 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: BH2677 Dated: 28th January 2000 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: BF3184 Dated: 8th March 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: BF1904 Dated: 29th January 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: BB6939 Dated: 2nd December 1998 Process Type: IPC major (substantial) variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: BE6803 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: AZ4719 Dated: 19th September 1997 Process Type: IPC major (substantial) variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status:** **Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: AY2591 Dated: 4th April 1997 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: AV8771 Dated: 10th February 1997 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: AU8733 Dated: 29th March 1996 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
19	**Integrated Pollution Controls** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QZ Authority: Environment Agency, Welsh Region Permit Reference: AR0349 Dated: 31st July 1995 Process Type: IPC application for process that was regulated by HMIP for air releases under previous legislation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	767	3	337500 186700
20	**Integrated Pollution Controls** Name: British Steel Plc Location: Llanwern Works, NEWPORT, Gwent, NP9 0XN Authority: Environment Agency, Welsh Region Permit Reference: BF5756 Dated: 26th February 1999 Process Type: IPC minor (non-substantial) variation to previous variation Description: 2.1 A (G) Iron and Steel processes within the Metal Industry **Status: Application has met the requirements for authorisation (but not yet authorised)** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	884	3	337607 186779
21	**Integrated Pollution Controls** Name: Air Products (gb) Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: BC5288 Dated: 24th November 1998 Process Type: IPC minor (non-substantial) variation to previous variation Description: 1.2 A (B) Carbonisation and associated processes within the Fuel & Power Industry **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A10NW (E)	913	3	337602 186111
21	**Integrated Pollution Controls** Name: Air Products (gb) Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Environment Agency, Welsh Region Permit Reference: AF7002 Dated: 16th December 1992 Process Type: IPC new application Description: 1.2 A (B) Carbonisation and associated processes within the Fuel & Power Industry **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Automatically positioned to the address	A10NW (E)	913	3	337602 186111

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
22	**Integrated Pollution Prevention And Control** Name: Llanwern Steelworks Epr/Bs3905ip Location: Corus Strip Products, Llanwern Steelworks, Newport, Gwent, NP19 4QZ Authority: Natural Resources Wales Permit Reference: Bs3905ip Original Permit Ref: Tp3931zp Effective Date: 13th May 2013 **Status:** **Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Manually positioned to the address or location Activity Code: 2.1 PART A (1) C) Activity Description: Not Supplied Primary Activity: Y Activity Code: 2.1 PART A (2) C) Activity Description: Not Supplied Primary Activity: N Activity Code: 1.1 A(1) (A) Activity Description: Not Supplied Primary Activity: N	A19SE (NE)	626	2	337291 186908
23	**Integrated Pollution Prevention And Control** Name: Air Products (Br) Limited Location: Llanwern Hydrogen Plant Ea/Epr/Bl2459ic/V002, Queensway, Spencer Works,,, Newport, NP19 4QX Authority: Natural Resources Wales Permit Reference: QP3236ZW Original Permit Ref: Bl2459ic Effective Date: 4th March 2013 **Status:** **Effective** Application Type: Variation App. Sub Type: Minor Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 A(1) (A) (I) Activity Description: Inorganic Chemicals; Gases Eg Ammonia, Primary Activity: Y	A10NW (E)	913	2	337602 186111
23	**Integrated Pollution Prevention And Control** Name: Llanwern Hydrogen Plant Epr/Bl2459ic Location: Llanwern Hydrogen Plant, Queens Way, Spencer Works, Llanwern, Newport, Gwent, NP19 4QX Authority: Natural Resources Wales Permit Reference: Bl2459ic Original Permit Ref: Qp3236zw Effective Date: 4th March 2013 **Status:** **Effective** Application Type: Bespoke App. Sub Type: Not Supplied Positional Accuracy: Automatically positioned to the address Activity Code: 4.2 PART A (1) A) (I) Activity Description: Not Supplied Primary Activity: Y	A10NW (E)	913	2	337602 186111
24	**Local Authority Integrated Pollution Prevention And Control** Name: Cambrian Stone Ltd Location: Llanwern Works, Newport Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: APA/011 Dated: Not Supplied Process Type: Mineral Industries Description: 3/15 **Status:** **Permit Issued** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	375	4	335948 186426
25	**Local Authority Integrated Pollution Prevention And Control** Name: Civil & Marine Ltd Location: Llanwern Works, Newport, NP19 4QX Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LA-IPPC/001/05/v2 Dated: Not Supplied Process Type: Production and Processing of Metals Description: Drying & Grinding of blast furnace slag **Status:** **Permit Revoked** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Local Authority Integrated Pollution Prevention And Control** Name: Newport Galvanisers Ltd Location: Llanwern Works, Newport, NP19 4QX Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LA-IPPC002/06 Dated: Not Supplied Process Type: Production and Processing of Metals Description: Hot dip galvanising **Status: Permit Issued** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157
26	**Local Authority Pollution Prevention and Controls** Name: Cambrian Stone Ltd Location: Llanwern Works, NEWPORT, NP9 0QX Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: APA/011 Dated: 16th August 1993 Process Type: Local Authority Air Pollution Control Description: PG3/15 Mineral drying and roadstone coating processes **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	375	4	335948 186426
26	**Local Authority Pollution Prevention and Controls** Name: Corus Group Plc Location: Llanwern Works, Zodiac Line, NEWPORT, Gwent, NP9 0XD Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: Apa/013/92 Dated: 28th October 1992 Process Type: Local Authority Air Pollution Control Description: PG2/2 Hot dip galvanising processes **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A12SE (W)	375	4	335948 186427
27	**Local Authority Pollution Prevention and Controls** Name: Tarmac Limited Location: Llanwen Works, Queensway, Newport, Np19 0dx Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LAPPC/039/07/v1 Dated: 6th June 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157
27	**Local Authority Pollution Prevention and Controls** Name: Civil & Marine Ltd (Heidelberg Cement Group) Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LA-IPPC001/05/v2 Dated: 8th June 1993 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Transferred to LAIPPC** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157
27	**Local Authority Pollution Prevention and Controls** Name: Newport Galvanisers Ltd Location: Llanwern Works, Newport, Np19 4qx Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LA-IPPC002/06/v1 Dated: 26th August 1992 Process Type: Local Authority Air Pollution Control Description: PG6/23 Coating of metal and plastic **Status: Transferred to LAIPPC** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157
27	**Local Authority Pollution Prevention and Controls** Name: Tarmac Topmix Location: Llanwern Works, Queensway, Llanwern, Newport, NP19 0QX Authority: Newport City Council, Public Protection and Environmental Services Permit Reference: LAPPC/031/05/v2 Dated: Not Supplied Process Type: Local Authority Pollution Prevention and Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A18SW (N)	407	4	336313 187157
	Nearest Surface Water Feature	A13SE (SE)	9	-	336722 186317

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
28	**Prosecutions Relating to Authorised Processes** Location: B O S Plant, Llanwern Site, NEWPORT, Gwent, NP9 0XN Prosecution Text: Failure to use best practicable means to prevent emission of noxious or offensive substances. Prosecution Act: HSWA74 Hearing Date: 18th September 1992 Verdict: Guilty Fine: 2000 Costs: 19000 Positional Accuracy: Manually positioned to the address or location	A15SW (E)	874	3	337605 186490
29	**Registered Radioactive Substances** Name: Corus Uk Ltd Location: Corus Strip Products,Llanwern Works, Newport, Gwent, Np9 0xn Authority: Natural Resources Wales Permit Reference: Bj2920 Dated: 7th September 2000 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	806	2	337543 186661
29	**Registered Radioactive Substances** Name: Corus Uk Ltd Location: Llanwern Works, NEWPORT, Gwent, NP9 0XN Authority: Natural Resources Wales Permit Reference: BH0119 Dated: 14th October 1999 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Minor variation to authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	806	2	337543 186661
29	**Registered Radioactive Substances** Name: Corus Uk Ltd Location: PO Box 10, NEWPORT, Gwent, NP9 0XN Authority: Natural Resources Wales Permit Reference: BA6283 Dated: 30th June 1998 Process Type: Authorisation under S13 RSA for the disposal of Radioactive waste (was RSA60 S7) Description: Authorisation under RSA **Status: Authorisation superseded by a substantial or non substantial variation** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	806	2	337543 186661
	River Quality Name: Monks D GQA Grade: River Quality C Reach: Bsc Transformer Stn. - Barn Fm. Estimated Distance (km): 2.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A13SE (E)	0	3	336581 186528
	River Quality Name: Monks D GQA Grade: River Quality B Reach: Barn Fm. - M4 Estimated Distance (km): 3.1 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A18NW (N)	649	3	336500 187406
	River Quality Name: Monks D GQA Grade: River Quality E Reach: Goldcliff - Bsc Transformer Stn. Estimated Distance (km): 3.7 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A8SE (S)	746	3	336581 185583

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
30	**River Quality Biology Sampling Points** Name: Monks Ditch Reach: Bsc Transformer Station To Barn Farm Estimated Distance: 2.50 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade C - Fairly Good Year: 1995 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2000 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2002 GQA Grade: River Quality Biology GQA Grade Not Supplied Year: 2003 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2004 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2007 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2008 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2009 GQA Grade: River Quality Biology GQA Grade C - Fairly Good	A18NW (N)	643	3	336500 187400
31	**River Quality Biology Sampling Points** Name: Monks Ditch Reach: Goldcliff To Bsc Transformer Station Estimated Distance: 3.70 Positional Accuracy: Located by supplier to within 100m Year: 1990 GQA Grade: River Quality Biology GQA Grade B - Good Year: 1995 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2000 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2002 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2003 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2004 GQA Grade: River Quality Biology GQA Grade A - Very Good Year: 2005 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2006 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2007 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2008 GQA Grade: River Quality Biology GQA Grade B - Good Year: 2009 GQA Grade: River Quality Biology GQA Grade B - Good	A4NW (S)	841	3	336900 185500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**River Quality Chemistry Sampling Points** Name: Monks Ditch Reach: Bsc Transformer Stn. To Barn Farm Estimated Distance: 2.50 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade E - Poor Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade C - Fairly Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied	A13SE (SE)	22	3	336723 186301
	Groundwater Vulnerability Map Combined Classification: Secondary Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, Unproductive Superficial Aquifer Pollutant Speed: High Bedrock Flow: Well Connected Fractures Dilution: 300-550 mm/year Baseflow Index: >70% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13SE (SW)	0	2	336526 186528
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - B	A13SE (SW)	0	2	336526 186528
	Superficial Aquifer Designations Aquifer Designation: Unproductive Strata	A13SE (SW)	0	2	336526 186528

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	336540 186480
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	336526 186480
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	0	2	336605 186400
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	0	2	336515 186420
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (N)	0	2	336500 186710
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SE (SW)	0	2	336526 186528
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	0	2	336360 186570
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	0	2	336720 186525
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	12	2	336300 186560
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	13	2	336345 186720
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	20	2	336420 186775
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	24	2	336305 186400
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (N)	33	2	336600 186795
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	45	2	336300 186610
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	49	2	336260 186535
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	49	2	336380 186805

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (N)	51	2	336545 186810
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	56	2	336635 186270
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	57	2	336526 186275
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	57	2	336676 186260
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	59	2	336656 186265
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	60	2	336655 186265
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336641 186265
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336640 186265
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336696 186260
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336701 186260
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	62	2	336631 186265
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	65	2	336650 186260
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (E)	91	2	336825 186550
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	93	2	336826 186545
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	97	2	336830 186528
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	103	2	336275 186725

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	105	2	336280 186790
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	105	2	336220 186455
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	109	2	336841 186530
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	111	2	336845 186560
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (E)	112	2	336846 186550
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (E)	114	2	336845 186528
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (NE)	116	2	336695 186820
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	117	2	336850 186545
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	118	2	336670 186850
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	120	2	336835 186340
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (NE)	122	2	336671 186855
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	123	2	336205 186425
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	125	2	336675 186855
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (E)	138	2	336875 186585
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	154	2	336280 186870
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	184	2	336791 186790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	188	2	336200 186800
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A18SE (N)	203	2	336560 186965
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	218	2	336195 186875
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A12SE (SW)	227	2	336110 186310
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14SW (SE)	234	2	336950 186340
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (E)	236	2	336965 186680
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (NE)	236	2	336865 186815
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	336526 186480
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	0	2	336720 186525
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	336540 186480
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (N)	0	2	336500 186710
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	0	2	336360 186570
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	0	2	336605 186400
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (S)	0	2	336515 186420
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial/Tidal Models Boundary Accuracy: As Supplied	A13SE (SW)	0	2	336526 186528
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	12	2	336300 186560

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	13	2	336345 186720
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	20	2	336420 186775
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (SW)	24	2	336305 186400
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (N)	33	2	336600 186795
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (W)	45	2	336300 186610
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	49	2	336260 186535
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	49	2	336380 186805
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (N)	51	2	336545 186810
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	56	2	336635 186270
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (S)	57	2	336526 186275
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	57	2	336656 186265
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	60	2	336655 186265
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	60	2	336701 186260
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336641 186265
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336696 186260
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	61	2	336640 186265

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	62	2	336631 186265
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (E)	62	2	336791 186500
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	65	2	336650 186260
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	66	2	336725 186255
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	73	2	336735 186250
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	76	2	336741 186250
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	76	2	336726 186245
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	86	2	336755 186245
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (E)	91	2	336825 186550
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	93	2	336826 186545
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	96	2	336831 186570
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	97	2	336830 186528
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	103	2	336275 186725
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	104	2	336670 186830
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	105	2	336220 186455
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	105	2	336280 186790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (E)	107	2	336841 186560
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (E)	109	2	336841 186530
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	111	2	336845 186560
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (E)	112	2	336846 186550
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (NE)	112	2	336666 186845
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (E)	114	2	336845 186528
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (NE)	116	2	336695 186820
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	117	2	336850 186545
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	118	2	336670 186850
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SE (SE)	120	2	336835 186340
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NE (NE)	122	2	336671 186855
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13SW (W)	123	2	336205 186425
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	125	2	336675 186855
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (E)	138	2	336875 186585
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	154	2	336280 186870
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	184	2	336791 186790

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	188	2	336200 186800
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A18SE (N)	203	2	336560 186965
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A13NW (NW)	218	2	336195 186875
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A12SE (SW)	227	2	336110 186310
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14SW (SE)	234	2	336950 186340
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (E)	236	2	336965 186680
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Tidal Models Boundary Accuracy: As Supplied	A14NW (NE)	236	2	336865 186815
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SW (S)	0	2	336515 186420
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (N)	0	2	336500 186710
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (SE)	0	2	336605 186400
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (S)	0	2	336526 186480
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (S)	0	2	336540 186480
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (W)	0	2	336360 186570
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (E)	0	2	336720 186525
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (W)	12	2	336300 186560
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	13	2	336345 186720
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	20	2	336420 186775
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SW (SW)	24	2	336305 186400
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NE (N)	33	2	336600 186795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (W)	45	2	336300 186610
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	49	2	336380 186805
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SW (W)	49	2	336260 186535
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NE (N)	51	2	336545 186810
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (S)	57	2	336526 186275
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (E)	97	2	336830 186528
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	103	2	336275 186725
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	105	2	336280 186790
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SW (W)	105	2	336220 186455
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NE (NE)	116	2	336695 186820
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (SE)	120	2	336835 186340
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SW (W)	123	2	336205 186425
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A14NW (E)	138	2	336875 186585
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	154	2	336280 186870
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	188	2	336200 186800
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A18SE (N)	203	2	336560 186965
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13NW (NW)	218	2	336195 186875
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A12SE (SW)	227	2	336110 186310
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A14SW (SE)	234	2	336950 186340
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A14NW (NE)	236	2	336865 186815
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A14NW (E)	236	2	336965 186680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flood Water Storage Areas None				
	Flood Defences None				
33	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1057.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A13SE (E)	12	5	336743 186510
34	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SE (SE)	47	5	336638 186280
35	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SE (S)	47	5	336621 186281
36	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 311.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SW (S)	47	5	336507 186291
37	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A13SE (SE)	48	5	336723 186274
38	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A13SE (SE)	50	5	336723 186271
39	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SE (SE)	50	5	336723 186271
40	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SE (SE)	51	5	336728 186272

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SW (SW)	59	5	336311 186307
42	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 331.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SW (SW)	69	5	336294 186309
43	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A13SE (SE)	89	5	336720 186232
44	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1296.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SW (SW)	108	5	336248 186301
45	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 553.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A13SE (SE)	115	5	336718 186206
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 172.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SE (SE)	131	5	336831 186264
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 324.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NE (SE)	165	5	336780 186169
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 159.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A13SW (SW)	167	5	336188 186282
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	239	5	336220 186150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 452.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Wall Catchment Name: Usk and Llwyd Primacy: 2	A8NE (SE)	247	5	336813 186094
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 90.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	276	5	336192 186124
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	276	5	336195 186122
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14SW (SE)	303	5	337009 186250
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14SW (SE)	303	5	337009 186254
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 117.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14SW (SE)	304	5	337009 186250
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 36.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	315	5	336088 186169
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18SE (NE)	359	5	336822 187038
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 175.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	361	5	335966 186306

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	366	5	335963 186336
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 818.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	366	5	335963 186336
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	368	5	335963 186324
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	369	5	335964 186310
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (W)	370	5	335963 186309
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	372	5	336032 186147
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	373	5	336035 186142
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	376	5	336041 186129
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	398	5	336099 186042

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	401	5	336104 186034
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 194.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NW (SE)	414	5	336885 185944
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 88.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	437	5	336132 185972
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19SW (NE)	450	5	336934 187053
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 157.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A14SW (SE)	451	5	337156 186238
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 800.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19SW (NE)	465	5	336955 187051
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 395.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NW (SE)	478	5	336877 185871
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	488	5	336431 185854
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	489	5	336496 185848

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 248.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Middle Reen Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	492	5	336638 185833
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 128.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (SW)	494	5	335854 186223
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	497	5	336205 185875
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SE (SW)	497	5	335850 186232
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 172.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	499	5	336203 185874
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	499	5	336203 185874
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 209.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NE (SW)	500	5	335905 186105
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	501	5	336212 185869
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	501	5	336212 185869

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 212.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8NW (SW)	501	5	336217 185868
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 281.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (SW)	503	5	336214 185867
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 93.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NW (SE)	506	5	337187 186144
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.4 Watercourse Level: Underground Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	508	5	336642 187269
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	512	5	336477 185826
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	519	5	335812 186319
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	522	5	335807 186332
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	522	5	335807 186336
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	531	5	336460 185809

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 135.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	533	5	336459 185807
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	533	5	336459 185807
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 328.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	533	5	336460 185806
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1126.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	535	5	336615 187297
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	545	5	337210 186097
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 46.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	547	5	337212 186095
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 73.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	547	5	337212 186095
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	548	5	336751 187287
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	558	5	336402 187314

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	571	5	337271 186201
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	574	5	336552 187336
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	577	5	336746 187319
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 45.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	577	5	336746 187319
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	582	5	336317 187338
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	582	5	337276 186173
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	586	5	336795 187313
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	587	5	336483 187342
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	587	5	336483 187342

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	587	5	336791 187314
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	587	5	336877 187275
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 140.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	592	5	336350 187347
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	592	5	336350 187347
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	594	5	335735 186332
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	598	5	336211 187328
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	599	5	336536 187361
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	600	5	336388 187356
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 237.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (NE)	602	5	336857 187303

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 249.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	602	5	336909 185751
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (NE)	602	5	336857 187303
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	603	5	336396 187358
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14SE (E)	603	5	337313 186225
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	604	5	336401 187360
127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 172.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	604	5	337282 186117
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A14SE (E)	607	5	337313 186225
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 181.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	607	5	336876 187299
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	610	5	336742 187354

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 369.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	618	5	336428 187372
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	633	5	336131 187336
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	637	5	336743 187382
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 315.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	638	5	336365 185710
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	638	5	335726 186158
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 179.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A9SW (SE)	639	5	336878 185703
137	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	641	5	336213 187375
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	641	5	335722 186165
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 329.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	641	5	335721 186164

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	642	5	336213 187375
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 166.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17SE (NW)	643	5	335860 187130
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (S)	645	5	336869 185694
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	646	5	336556 187408
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	648	5	336201 187378
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 133.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9NE (SE)	648	5	337245 185949
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 244.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	650	5	335766 186046
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 180.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	650	5	335766 186046
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	652	5	336192 187379

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149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	652	5	336752 187395
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 86.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	652	5	335683 186261
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 311.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	653	5	335691 186228
152	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 190.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	662	5	336092 185742
153	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 394.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	662	5	336094 185741
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	666	5	337098 185777
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: Underground Permanent: True Watercourse Name: Black Wall Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	673	5	336825 185656
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Wall Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	674	5	336822 185655
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 282.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	676	5	335655 186305

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	676	5	335654 186311
159	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 626.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A14SE (E)	684	5	337390 186218
160	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14SE (E)	684	5	337390 186222
161	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 195.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	686	5	336390 185659
162	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	686	5	336390 185659
163	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A9SW (SE)	694	5	337054 185716
164	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Black Wall Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	694	5	336780 185630
165	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 157.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	695	5	336782 185629
166	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 135.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (S)	698	5	336880 185642

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
167	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (S)	698	5	336880 185642
168	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	703	5	336780 187440
169	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	706	5	336781 187443
170	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Oxleaze Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	709	5	336786 187445
171	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Oxleaze Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	710	5	336795 187443
172	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 420.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Oxleaze Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	710	5	336799 187442
173	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	710	5	336799 187442
174	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 32.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	710	5	336785 187446
175	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Oxleaze Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	710	5	336791 187444

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176	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	710	5	337091 187266
177	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	712	5	336062 187391
178	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SE (SE)	714	5	337221 185818
179	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	714	5	336064 187395
180	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 184.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	716	5	336052 187390
181	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	719	5	336233 187459
182	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14NE (E)	720	5	337444 186754
183	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	723	5	337092 187284
184	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SE (SE)	725	5	337218 185801

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185	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	726	5	337093 187288
186	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 207.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	729	5	336061 187409
187	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 403.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	731	5	337119 187268
188	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.6 Watercourse Level: Underground Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	731	5	337114 187274
189	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 76.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	733	5	336231 187472
190	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 103.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	735	5	335845 185816
191	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	735	5	335845 185816
192	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	738	5	335843 185815
193	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	739	5	336817 187467

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194	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	741	5	336798 187475
195	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	741	5	336798 187475
196	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 149.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	741	5	335839 185814
197	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	742	5	337052 185660
198	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14NE (E)	745	5	337470 186751
199	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 81.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	746	5	337119 185695
200	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: Underground Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	749	5	336803 187481
201	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A14NE (E)	750	5	337476 186751
202	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 136.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	752	5	336632 187514

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203	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	756	5	336807 187488
204	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	760	5	335562 186392
205	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1248.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	763	5	337114 185670
206	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 142.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	764	5	337193 185725
207	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.1 Watercourse Level: Underground Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	767	5	336813 187498
208	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 208.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12SW (W)	770	5	335554 186384
209	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	771	5	336816 187501
210	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 170.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	778	5	336463 185560
211	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	778	5	336463 185560

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212	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 37.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	778	5	336465 185560
213	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 194.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12NW (W)	779	5	335540 186672
214	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12NW (W)	779	5	335540 186672
215	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	780	5	335888 185722
216	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	780	5	335888 185722
217	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.0 Watercourse Level: Underground Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	781	5	336822 187509
218	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12NW (W)	782	5	335534 186648
219	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	783	5	337020 185600
220	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	783	5	335885 185721

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221	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 23.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	786	5	336815 185541
222	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 270.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	787	5	335883 185718
223	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	788	5	336655 185535
224	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	788	5	336746 187536
225	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	789	5	335876 187360
226	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SE (S)	789	5	336653 185533
227	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	790	5	336995 185583
228	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	790	5	336995 185583
229	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	792	5	336723 187544

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
230	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	794	5	336831 187520
231	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	796	5	336832 187522
232	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 1	A18NE (N)	796	5	336832 187522
233	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	796	5	335986 187446
234	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 193.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (N)	797	5	336889 187503
235	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	797	5	336721 187549
236	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	798	5	337098 185621
237	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 74.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	801	5	336799 185524
238	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 395.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	801	5	335975 187445

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239	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	801	5	336855 187520
240	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 378.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19SE (NE)	805	5	337454 186982
241	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 176.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	806	5	336993 185565
242	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	806	5	336809 187539
243	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	808	5	336486 185529
244	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 228.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	808	5	336486 185529
245	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NE (N)	808	5	336807 187542
246	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A18NW (N)	809	5	336215 187547
247	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 168.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A8SW (S)	812	5	336217 185550

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248	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	814	5	335868 187386
249	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 177.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	816	5	335866 187387
250	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	816	5	335866 187387
251	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 373.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monks' Ditch Catchment Name: Usk and Llwyd Primacy: 1	A9SW (S)	818	5	336933 185532
252	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (N)	818	5	336865 187534
253	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	818	5	336780 187559
254	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	819	5	336776 187561
255	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	821	5	336768 187565
256	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 167.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (N)	822	5	336867 187537

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257	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	825	5	336756 187571
258	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 99.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A15NW (E)	828	5	337555 186745
259	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 218.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	830	5	335602 185970
260	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 110.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	830	5	335603 185969
261	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	831	5	336737 187581
262	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	833	5	335476 186522
263	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	836	5	335473 186527
264	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	837	5	337120 185589
265	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 207.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SW (SE)	838	5	337120 185587

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
266	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	838	5	336715 187592
267	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	843	5	335963 185602
268	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	843	5	336740 185478
269	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	843	5	336740 185478
270	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 33.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	843	5	335963 185602
271	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	843	5	335653 185867
272	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7NW (SW)	843	5	335651 185871
273	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 99.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	846	5	335932 185615
274	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	847	5	335960 185599

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 121.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	847	5	335960 185599
276	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12NW (W)	849	5	335519 186864
277	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 111.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	849	5	336745 185472
278	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 206.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NE (NW)	854	5	335854 187426
279	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 148.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A12NW (W)	857	5	335515 186877
280	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	865	5	336696 185456
281	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 94.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	867	5	336694 185454
282	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A23SE (N)	871	5	336643 187633
283	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A23SE (N)	873	5	336646 187634

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
284	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	874	5	337005 187533
285	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 274.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NW (NE)	874	5	337005 187533
286	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 161.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	875	5	335697 185766
287	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	876	5	336550 185455
288	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 293.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Oxleaze Reen Catchment Name: Usk and Llwyd Primacy: 1	A19NE (NE)	883	5	337215 187387
289	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	883	5	337215 187387
290	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	883	5	336010 185536
291	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 153.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	883	5	336010 185536
292	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	886	5	336560 185444

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
293	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	886	5	336560 185444
294	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 137.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	887	5	337217 187391
295	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 143.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A24SW (N)	887	5	336891 187597
296	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (N)	887	5	336893 187597
297	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (N)	895	5	336899 187603
298	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1370.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SE (SE)	896	5	337294 185638
299	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: Underground Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	900	5	336574 185429
300	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (NE)	902	5	337016 187558
301	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (N)	903	5	336904 187610

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
302	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	904	5	336579 185424
303	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	905	5	335408 186457
304	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 234.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (NE)	907	5	337019 187562
305	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	909	5	336584 185419
306	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A16SE (NW)	913	5	335510 187025
307	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	913	5	336348 185435
308	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 204.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Monkscroft Reen Catchment Name: Usk and Llwyd Primacy: 1	A4NW (S)	913	5	336946 185437
309	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 37.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	916	5	336345 185432
310	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A16SE (NW)	919	5	335510 187042

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
311	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	920	5	336377 185425
312	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A23SE (N)	920	5	336761 187667
313	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	920	5	335393 186447
314	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	922	5	336614 185404
315	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	923	5	336612 185403
316	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	924	5	336374 185422
317	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Ellen Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	926	5	336602 185400
318	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 138.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Chapel Reen Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	929	5	336605 185397
319	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	934	5	336365 185412

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
320	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	936	5	336311 185415
321	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	936	5	336363 185410
322	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 257.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Julian's Reen Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	936	5	335382 186408
323	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Longditch Reen Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	936	5	335382 186408
324	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Longditch Reen Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	936	5	335382 186409
325	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 57.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	938	5	336818 185388
326	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	938	5	336818 185388
327	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A16SE (NW)	939	5	335510 187101
328	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	939	5	336313 185411

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
329	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	940	5	335395 186251
330	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 77.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	940	5	335395 186251
331	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	941	5	335864 185544
332	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Longditch Reen Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	942	5	335376 186413
333	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 92.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SE (SW)	944	5	335862 185543
334	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 28.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	944	5	336318 185406
335	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 90.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A23SE (N)	945	5	336782 187689
336	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (S)	947	5	336090 185440
337	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17SW (NW)	948	5	335511 187127

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
338	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NW (NW)	949	5	335683 187396
339	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	953	5	335367 186396
340	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	954	5	337471 187225
341	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 241.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (N)	954	5	336932 187654
342	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 112.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A24SW (N)	954	5	336932 187654
343	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 203.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (W)	955	5	335391 186184
344	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 110.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (SW)	957	5	335874 185521
345	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (SW)	957	5	335874 185521
346	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 104.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	959	5	336463 185379

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
347	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (W)	959	5	335406 186105
348	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 63.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (W)	959	5	335409 186098
349	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A16SE (NW)	960	5	335506 187145
350	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 190.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A16SE (NW)	960	5	335506 187145
351	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (SW)	960	5	335869 185520
352	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (SW)	964	5	335863 185519
353	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 41.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (S)	966	5	336979 185390
354	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (SE)	966	5	337017 185403
355	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	970	5	336774 185352

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
356	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	971	5	337471 187251
357	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NW (NW)	971	5	335662 187405
358	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	973	5	337474 187251
359	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	973	5	336471 185365
360	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	975	5	337471 187257
361	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	975	5	336470 185362
362	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NE (S)	975	5	336768 185347
363	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NE (SE)	977	5	337236 185495
364	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 1.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NE (SE)	977	5	337236 185495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
365	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NE (SE)	977	5	337237 185495
366	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 27.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	978	5	337477 187255
367	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (SW)	978	5	335413 186026
368	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (SW)	979	5	335444 185951
369	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 152.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A6NE (SW)	979	5	335443 185953
370	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 115.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 1	A23SE (N)	980	5	336706 187736
371	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 103.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (S)	982	5	336127 185395
372	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A2NE (S)	982	5	336127 185395
373	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 85.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (SE)	985	5	337083 185407

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
374	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (SE)	985	5	337083 185407
375	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	987	5	335341 186344
376	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A11SE (W)	987	5	335326 186455
377	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A3NW (S)	990	5	336471 185347
378	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (SE)	990	5	337085 185402
379	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A17NW (NW)	990	5	335654 187425
380	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 54.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NW (SE)	993	5	337085 185399
381	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 84.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A9SE (SE)	994	5	337359 185564
382	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	995	5	335776 185538

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
383	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 180.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A7SW (SW)	995	5	335776 185538
384	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	996	5	337504 187251
385	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	996	5	337504 187251
386	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 127.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NE (SE)	996	5	337237 185472
387	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Usk and Llwyd Primacy: 2	A4NE (SE)	996	5	337237 185472
388	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.9 Watercourse Level: Underground Permanent: True Watercourse Name: Barn Reen Catchment Name: Usk and Llwyd Primacy: 2	A19NE (NE)	999	5	337509 187249

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
389	**Licensed Waste Management Facilities (Landfill Boundaries)** Name: Llanwern Landfill : South Side Of Queensway Licence Number: 30009 Location: Llanwern Landfill South Side Of Queensway, Corus, Llanwern Works, Newport, Gwent, NP19 4QX Licence Holder: Corus Strip Products P P C (Gp3331sv) Authority: Natural Resources Wales Site Category: Industrial Waste Landfills Max Input Rate: Not Supplied **Licence Status:** **Modified** Issued: 31st May 1979 Positional Accuracy: Positioned by the supplier Boundary Accuracy: As Supplied	A13SE (SE)	127	2	336788 186218
390	**Licensed Waste Management Facilities (Locations)** Licence Number: HP3899FC Location: Llanwern Landfill : South Side Of Queensway, Llanwern Works, Newport, Gwent, Newport, NP19 4QX Operator Name: Corus Strip Products P P C (gp3331sv) Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Industrial Waste Landfills **Licence Status:** **Effective** Issued: 31st May 1979 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SW (E)	854	2	337559 186205
390	**Licensed Waste Management Facilities (Locations)** Licence Number: 30009 Location: Llanwern Landfill South Side Of Queensway, Corus, Llanwern Works, Newport, NP19 4QX Operator Name: Corus Strip Products P P C (gp3331sv) Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Industrial Waste Landfills **Licence Status:** **Modified** Issued: 31st May 1979 Last Modified: 25th August 2009 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15SW (E)	854	2	337559 186205
391	**Licensed Waste Management Facilities (Locations)** Licence Number: HB3497TH Location: Llanwern Works Inert Waste Recycling Facility, Queens Way, Llanwern, Newport, Newport, NP19 4QX Operator Name: Tarmac Trading Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Physical Treatment Facilities **Licence Status:** **Effective** Issued: 17th November 2015 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NW (SE)	971	2	337596 185917
391	**Licensed Waste Management Facilities (Locations)** Licence Number: 900015 Location: Queens Way, Llanwern, Newport, NP19 4QX Operator Name: Lafarge Trading Tarmac Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Physical Treatment Facilities **Licence Status:** **Issued** Issued: 18th October 2013 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NW (SE)	971	2	337596 185917

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Local Authority Landfill Coverage Name: Newport County Borough Council - Has no landfill data to supply		0	6	336526 186528
392	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A23SE (N)	800	10	336557 187563
393	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13NE (E)	0	10	336709 186545
394	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (E)	208	10	336945 186592
395	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1989	A17SE (NW)	373	10	336081 186975
396	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1989	A17SE (NW)	376	10	336078 186975
397	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9SW (SE)	647	10	336911 185704
398	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (E)	657	10	337397 186610
399	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	857	10	335453 186569
400	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	887	10	335423 186580
401	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	919	10	335390 186570
402	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	920	10	335419 186779
403	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	980	10	335331 186597
404	**Registered Landfill Sites** Licence Holder: British Steel Licence Reference: 024/79 Site Location: South Side of Queensway, Llanwern Works, NEWPORT, Gwent, NP9 0XN Licence Easting: 337500 Licence Northing: 185900 Operator Location: Llanwern Works, NEWPORT, Gwent, NP9 0XN Authority: Environment Agency Wales, South East Area Site Category: Landfill - with lagoon Max Input Rate: Undefined Waste Source Restrictions: Only waste produced on site Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 31st May 1979 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Ferruginous Sludge Wastes Ferruginous Slurry Wastes Prohibited Waste: Waste N.O.S.	A9NE (SE)	892	3	337500 185900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
405	**Registered Waste Treatment or Disposal Sites** Licence Holder: Bitmac Ltd Licence Reference: 026/80 Site Location: Llanwern Works, NEWPORT, Gwent, NP9 0XN Operator Location: Queensway, Llanwern Works, Newport, Gwent Authority: Environment Agency Wales, South East Area Site Category: Incineration Max Input Rate: Undefined Waste Source Restrictions: Only waste produced on site Licence Status: Site now IPC authorisedAuthorised Dated: 1st March 1980 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste Sulphuric Acid (Acid Tars)	A13SW (W)	113	3	336200 186500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
406	**Control of Major Accident Hazards Sites (COMAH)** Name: British Oxygen Co Limited Location: NEWPORT, Gwent, NP18 2DS Reference: Not Supplied Type: Lower Tier **Status: Record Ceased To Be Supplied Under COMAH Regulations** Positional Accuracy: Manually positioned to the address or location	A13NE (N)	0	7	336546 186739
407	**Control of Major Accident Hazards Sites (COMAH)** Name: Koppers Uk Limited Location: Queensway, NEWPORT, Gwent, NP19 4QX Reference: Not Supplied Type: Lower Tier **Status: Record Ceased To Be Supplied Under COMAH Regulations** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	886	7	337605 186800
408	**Control of Major Accident Hazards Sites (COMAH)** Name: Air Products (Br) Limited Location: Llanwern, Spencer Works, Queensway, Newport, Gwent, Monmouthshire, Np19 4qx Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Manually positioned to the address or location	A10NW (E)	913	7	337602 186111
408	**Control of Major Accident Hazards Sites (COMAH)** Name: Air Products Plc Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Reference: Not Supplied Type: Lower Tier **Status: Active** Positional Accuracy: Automatically positioned to the address	A10NW (E)	913	7	337602 186111
409	**Notification of Installations Handling Hazardous Substances (NIHHS)** Name: B.S.C. Location: Llanwern Works, NEWPORT, Gwent, NPT 0XN **Status: Not Active** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	155	7	336722 186844
410	**Planning Hazardous Substance Consents** Name: British Steel Location: Llanwern Steelworks, Llanwern, Newport , Gwent, NP9 0XN Authority: Newport City Council, Planning Department Application Ref: 93/0089/Hsc Hazardous Substance: Liquefied extremely flammable gas (including LPG) and natural gas (whether liquefied or not) Maximum Quantity: 320 Application date: 9th February 1993 **Decision: Deemed Consent GrantedGranted** Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	191	8	336229 186868
411	**Planning Hazardous Substance Consents** Name: Air Products (Gb) Ltd Location: Queens Way, Llanwern, Hersham, NEWPORT, Gwent, NP1 Authority: Newport City Council, Planning Department Application Ref: 92/1068/Hdc Hazardous Substance: Part B, Highly Reactive and Explosive Substance, Hydrogen, where amount held is greater than or equal to 2 tonnes Maximum Quantity: 7 Application date: 9th November 1992 **Decision: Unknown at time of reportUnknown** Positional Accuracy: Manually positioned to the address or location	A15NW (E)	863	8	337588 186767
412	**Planning Hazardous Substance Consents** Name: British Steel Plc Location: Llanwern Works, Llanwern, NEWPORT, Gwent, NP1 Authority: Newport City Council, Planning Department Application Ref: 92/1124/Hdc Hazardous Substance: Part C, Flammable Substance (Not in Parts A&B), Gas or gases flammable in air, when held as a gas, where amount held is >= 15tonnes Maximum Quantity: 640 Application date: 30th November 1992 **Decision: Unknown at time of reportUnknown** Positional Accuracy: Manually positioned to the address or location	A15SW (E)	865	8	337595 186485

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13SE (SW)	0	1	336526 186528
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13SE (SW)	0	1	336526 186528
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SW (NE)	437	1	336926 187048
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SW (NE)	476	1	336925 187103
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 120 - 180 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	504	1	336450 187268
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	546	1	336428 187308
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 90 - 120 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A18NW (N)	700	1	336449 187456

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
413	**BGS Recorded Mineral Sites** Site Name: Llanwern Steelworks Slag Location: Llanwern, Newport, Gwent Source: British Geological Survey, National Geoscience Information Service Reference: 13203 Type: Tip **Status: Ceased** Operator: Tarmac (A Crh Company) Operator Location: Not Supplied Periodic Type: Not Available Geology: Blast Furnace Slag Commodity: Blast Furnace Slag Positional Accuracy: Located by supplier to within 100m	A8NW (S)	237	1	336500 186100
414	**BGS Recorded Mineral Sites** Site Name: Llanwern Works Location: Llanwern, Newport, Gwent Source: British Geological Survey, National Geoscience Information Service Reference: 13204 Type: Tip **Status: Ceased** Operator: Hanson Cement Operator Location: Not Supplied Periodic Type: Not Available Geology: Ground Granulated Blast Furnace Slag - Addition, Cementitious Commodity: Blast Furnace Slag Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	362	1	337000 186100
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas In an area that might not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
415	**Contemporary Trade Directory Entries** Name: Tarmac Westen Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Classification: Stone Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	93	-	336430 186251
416	**Contemporary Trade Directory Entries** Name: Civil & Marine Ltd Location: Llanwern Works, NEWPORT, Gwent, NP19 4QX Classification: Concrete Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	176	-	336294 186184
417	**Contemporary Trade Directory Entries** Name: Tarmac Trading Ltd Location: LLANWERN WORKS, LLANWERN, NEWPORT, NP19 4QX Classification: Concrete & Mortar Ready Mixed **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	420	-	336460 185920
417	**Contemporary Trade Directory Entries** Name: Tarmac Western Ltd Location: Llanwern Works, Newport, NP19 4QX Classification: Quarries **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (S)	420	-	336462 185920
418	**Contemporary Trade Directory Entries** Name: Environmental Site Services Location: Llanwern Works, Newport, Gwent, NP19 4QX Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A9NE (SE)	755	-	337446 186138
418	**Contemporary Trade Directory Entries** Name: Newport Galvanizers Ltd Location: Llanwern Works, Newport, Gwent, NP19 4QX Classification: Metal Finishing Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	755	-	337446 186138
419	**Contemporary Trade Directory Entries** Name: Grant Rail Location: British Steel Site,Llanwern Wks, Newport, Gwent, NP6 1XX Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A19NW (NE)	766	-	337154 187282
420	**Contemporary Trade Directory Entries** Name: Heckett Ltd Location: Llanwern Works, Newport, Gwent, NP9 0XQ Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	814	-	337528 186811
421	**Contemporary Trade Directory Entries** Name: Cyrus Engineering Ltd Location: Care Of B S C,Llanwern Works, Newport, Gwent, NP19 4XN Classification: Engineers - General **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A15NW (E)	899	-	337622 186778
422	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	0	9	336614 186392
423	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	0	9	336405 186381
424	**Points of Interest - Manufacturing and Production** Name: Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	61	9	336759 186280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
425	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	92	9	336226 186484
425	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	144	9	336165 186536
426	**Points of Interest - Manufacturing and Production** Name: Tarmac (Western) Ltd Location: Llanwern Works, Newport, NP19 4QX Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A13SW (S)	93	9	336430 186251
426	**Points of Interest - Manufacturing and Production** Name: Tarmac Westen Ltd Location: Llanwern Works, Newport, NP19 4QX Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A13SW (S)	93	9	336430 186251
426	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	112	9	336370 186237
427	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	98	9	336225 186462
427	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	110	9	336210 186473
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	119	9	336197 186487
427	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SW (W)	120	9	336207 186438
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	141	9	336174 186489
427	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	154	9	336176 186406
427	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	158	9	336166 186454

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	170	9	336142 186505
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	170	9	336152 186457
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	177	9	336151 186424
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	212	9	336114 186438
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	216	9	336112 186420
427	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	218	9	336111 186397
428	**Points of Interest - Manufacturing and Production** Name: Celtic Business Park Location: NP19 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	131	9	336850 186389
428	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	168	9	336893 186448
428	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	181	9	336907 186461
428	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	192	9	336918 186464
428	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	202	9	336928 186466
429	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	140	9	336872 186654

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
429	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	145	9	336873 186668
429	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	224	9	336949 186689
430	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	149	9	336342 186202
431	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	176	9	336911 186569
431	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SW (E)	189	9	336921 186534
432	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	199	9	336350 186151
432	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	253	9	336290 186105
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	202	9	336275 186927
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	222	9	336285 186955
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	242	9	336305 186985
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	267	9	336257 186991
433	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	269	9	336274 187002

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	286	9	336284 187024
433	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	297	9	336294 187039
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	298	9	336245 187020
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	309	9	336204 187008
433	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	315	9	336255 187043
433	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	318	9	336261 187049
433	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	339	9	336186 187032
433	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	342	9	336199 187044
434	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	220	9	336347 186973
434	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	261	9	336359 187016
435	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (NE)	226	9	336914 186757
436	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A12NE (NW)	265	9	336136 186851

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
437	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	266	9	336523 186069
438	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	276	9	337011 186658
438	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	355	9	337088 186674
439	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	310	9	336886 186887
439	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	340	9	336889 186925
440	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	337	9	336541 187097
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	340	9	336274 187078
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	359	9	336227 187079
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	369	9	336252 187101
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	383	9	336276 187123
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	384	9	336295 187129
441	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	400	9	336266 187138

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
441	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	429	9	336213 187150
441	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	452	9	336247 187187
442	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	343	9	336322 186009
442	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NW (S)	349	9	336321 186003
442	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A8NW (S)	351	9	336330 186000
443	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	364	9	336195 187067
443	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	433	9	336149 187120
444	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	371	9	336988 186888
444	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	377	9	336987 186897
445	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	385	9	336508 185951
445	**Points of Interest - Manufacturing and Production** Name: Tarmac Location: Llanwern Works, Newport, NP19 4QX Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A8NW (S)	420	9	336460 185920
446	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	454	9	337106 186093

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
447	**Points of Interest - Manufacturing and Production** Name: Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	479	9	336776 187205
447	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SE (N)	483	9	336775 187210
448	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	488	9	337089 186954
448	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	526	9	337091 187004
448	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	580	9	337095 187071
449	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	492	9	336961 187087
450	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A18NE (N)	498	9	336695 187250
450	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A18NE (N)	502	9	336682 187257
450	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	506	9	336691 187259
450	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A18NE (N)	507	9	336683 187262
451	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	506	9	337226 186748
452	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	520	9	336083 187180

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
453	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	523	9	337247 186425
453	**Points of Interest - Manufacturing and Production** Name: Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	523	9	337247 186424
454	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	594	9	337323 186718
454	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	619	9	337348 186720
454	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	638	9	337368 186716
455	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	595	9	335749 186753
456	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	597	9	337329 186522
456	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SE (E)	604	9	337335 186503
456	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SE (E)	605	9	337338 186523
456	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14SE (E)	611	9	337342 186506
456	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	623	9	337353 186496
457	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SW (NE)	621	9	337096 187123

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
458	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	623	9	337277 186928
459	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	691	9	337239 187090
459	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	716	9	337271 187092
460	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	699	9	337425 186447
460	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	728	9	337454 186445
460	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	779	9	337505 186441
461	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	728	9	335973 185728
461	**Points of Interest - Manufacturing and Production** Name: Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	733	9	335973 185722
462	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	763	9	337495 186713
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	765	9	337497 186712
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	776	9	337510 186699
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	778	9	337511 186706

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	778	9	337511 186702
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	784	9	337518 186699
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	785	9	337518 186705
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	785	9	337518 186702
462	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	787	9	337519 186711
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	795	9	337528 186701
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A14NE (E)	814	9	337535 186783
462	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	818	9	337540 186776
462	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	818	9	337550 186714
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	819	9	337540 186783
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	821	9	337554 186707
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	823	9	337544 186783

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	828	9	337542 186811
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	828	9	337549 186782
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	830	9	337548 186796
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	833	9	337554 186782
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	845	9	337560 186811
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	845	9	337570 186763
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	849	9	337567 186796
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	861	9	337577 186810
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	865	9	337584 186795
462	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	875	9	337589 186819
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	882	9	337602 186793
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	896	9	337613 186807

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
462	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	899	9	337620 186791
463	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	813	9	337491 186083
463	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	845	9	337517 186058
464	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	864	9	337596 186510
464	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	873	9	337603 186483
464	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	877	9	337608 186498
464	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	901	9	337632 186497
464	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15SW (E)	914	9	337646 186507
465	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	890	9	337625 186690
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	915	9	337650 186690
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	941	9	337672 186731
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	943	9	337669 186765

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	943	9	337673 186741
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	946	9	337677 186731
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	947	9	337674 186757
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	948	9	337678 186739
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	950	9	337681 186731
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	951	9	337679 186756
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	952	9	337682 186739
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	955	9	337686 186730
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	957	9	337687 186739
465	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	957	9	337688 186735
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	959	9	337691 186725
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	959	9	337691 186722

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	960	9	337691 186729
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	962	9	337692 186738
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	965	9	337696 186729
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	966	9	337696 186738
465	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	970	9	337701 186728
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	903	9	337597 186134
466	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	926	9	337612 186098
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NW (E)	934	9	337621 186099
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NW (E)	934	9	337619 186093
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NW (E)	935	9	337624 186109
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NW (E)	939	9	337624 186093
466	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	940	9	337628 186105

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	941	9	337632 186119
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A10NW (E)	949	9	337638 186106
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (SE)	950	9	337627 186059
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	952	9	337634 186079
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (SE)	970	9	337648 186061
466	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A10NW (E)	980	9	337663 186078
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	911	9	337629 186805
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	917	9	337638 186789
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	950	9	337675 186770
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	956	9	337684 186756
467	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	961	9	337689 186755
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	965	9	337693 186755

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	970	9	337696 186768
467	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A15NW (E)	970	9	337696 186768
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	971	9	337701 186737
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	971	9	337699 186755
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	974	9	337705 186728
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	975	9	337706 186736
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	975	9	337703 186754
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	980	9	337712 186728
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	980	9	337708 186754
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	981	9	337712 186736
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	982	9	337714 186723
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	985	9	337717 186727

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	986	9	337714 186755
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	986	9	337717 186736
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	990	9	337722 186721
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	990	9	337718 186755
467	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to address or location	A15NW (E)	991	9	337717 186766
468	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	911	9	337510 185878
468	**Points of Interest - Manufacturing and Production** Name: Spencer Steelworks Location: NP19 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	911	9	337510 185879
469	**Points of Interest - Manufacturing and Production** Name: Tanks Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	948	9	335362 186583
469	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP19 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	963	9	335346 186563
470	**Points of Interest - Manufacturing and Production** Name: Tank Location: NP18 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A4NW (SE)	986	9	337109 185417
471	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A8NE (SE)	144	9	336797 186203
472	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	230	9	336526 186105

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
472	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	278	9	336469 186062
473	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	239	9	336816 186842
473	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18SE (NE)	261	9	336819 186889
474	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	362	9	336618 185965
475	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	368	9	335990 186226
475	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	373	9	335985 186225
475	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SE (W)	377	9	335955 186319
476	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	382	9	336034 186129
477	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	409	9	337055 186096
478	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	480	9	337065 185994
479	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	504	9	335826 186328
479	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	512	9	335817 186333

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
479	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (W)	517	9	335812 186332
480	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A12SW (SW)	507	9	335844 186222
481	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	508	9	335896 186105
481	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	512	9	335892 186104
482	**Points of Interest - Public Infrastructure** Name: Sluice Location: NP19 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	587	9	336431 187341
483	**Points of Interest - Public Infrastructure** Name: Sluice (Disused) Location: NP18 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	678	9	337034 185723
483	**Points of Interest - Public Infrastructure** Name: Sluice (Disused) Location: NP18 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	688	9	337057 185724
484	**Points of Interest - Public Infrastructure** Name: Slag Heap Location: NP19 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	847	9	337473 185945
485	**Points of Interest - Public Infrastructure** Name: Weir Location: NP18 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	982	9	336711 187738
485	**Points of Interest - Public Infrastructure** Name: Weir Location: NP18 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	982	9	336714 187738
486	**Points of Interest - Recreational and Environmental** Name: Play Area Location: NP19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A17SW (W)	801	9	335583 186891
487	**Points of Interest - Recreational and Environmental** Name: Play Area Location: NP18 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A23SE (N)	835	9	336635 187597

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
488	**Points of Interest - Recreational and Environmental** Name: Play Area Location: NP19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	886	9	335446 186749
489	**Points of Interest - Recreational and Environmental** Name: Play Area Location: NP19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	915	9	335396 186598
490	**Points of Interest - Recreational and Environmental** Name: Play Area Location: NP19 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A11NE (W)	980	9	335346 186723
491	**Underground Electrical Cables** Unique Feature Identifier: 10005592 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A14SE (E)	562	10	337283 186389
492	**Underground Electrical Cables** Unique Feature Identifier: 10005510 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A14SE (E)	562	10	337283 186384
493	**Underground Electrical Cables** Unique Feature Identifier: 10007516 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A14SE (E)	568	10	337288 186374
494	**Underground Electrical Cables** Unique Feature Identifier: 10005509 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A14SE (E)	570	10	337289 186374
495	**Underground Electrical Cables** Unique Feature Identifier: 10005585 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	757	10	337064 185650
496	**Underground Electrical Cables** Unique Feature Identifier: 10005664 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	758	10	337066 185650
497	**Underground Electrical Cables** Unique Feature Identifier: 10007513 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	766	10	337079 185647

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
498	**Underground Electrical Cables** Unique Feature Identifier: 10005507 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	766	10	337080 185647
499	**Underground Electrical Cables** Unique Feature Identifier: 10007514 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	791	10	337134 185650
500	**Underground Electrical Cables** Unique Feature Identifier: 10005665 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	791	10	337134 185651
501	**Underground Electrical Cables** Unique Feature Identifier: 10007515 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	800	10	337146 185648
502	**Underground Electrical Cables** Unique Feature Identifier: 10005508 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 27th October 2017	A9SW (SE)	801	10	337147 185647
503	**Underground Electrical Cables** Unique Feature Identifier: 10007521 Cable Status: Commissioned Cable Type: Alternating Current Record Last Updated: 25th May 2017	A4NW (SE)	879	10	337052 185510

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
504	**Ancient Woodland** Name: Not Supplied Reference: 8382 Area(m²): 94558.08 Type: Ancient and Semi-Natural Woodland	A23SW (N)	1000	2	336274 187749
505	**Sites of Special Scientific Interest** Name: Gwent Levels - Nash And Goldcliff Multiple Areas: Y Total Area (m2): 7606485.93 Source: Natural Resources Wales Reference: 64933wdb Designation Details: Biological Designation Date: 20th August 1987 Date Type: Notified	A12SE (SW)	244	2	336093 186307
506	**Sites of Special Scientific Interest** Name: Gwent Levels - Whitson Multiple Areas: Y Total Area (m2): 8913008.45 Source: Natural Resources Wales Reference: 14833wav Designation Details: Biological Designation Date: 6th July 1988 Date Type: Notified	A9SW (SE)	646	2	336881 185696

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Newport City Council - Public Protection and Environmental Services	January 2015	Annual Rolling Update
Natural Resources Wales	June 2020	Annually
Monmouthshire Council - Environment Department	September 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	July 2021	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	
Integrated Pollution Controls		
Environment Agency - Welsh Region	January 2009	
Integrated Pollution Prevention And Control		
Environment Agency - Welsh Region	January 2021	Quarterly
Natural Resources Wales	July 2021	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Monmouthshire Council - Environmental Health Department	June 2014	Variable
Newport City Council - Public Protection and Environmental Services	June 2014	Variable
Local Authority Pollution Prevention and Controls		
Monmouthshire Council - Environmental Health Department	June 2014	Annual Rolling Update
Newport City Council - Public Protection and Environmental Services	June 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Monmouthshire Council - Environmental Health Department	June 2014	Variable
Newport City Council - Public Protection and Environmental Services	June 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	August 2021	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	July 2015	
Natural Resources Wales	July 2015	
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	
Natural Resources Wales	March 2013	
Registered Radioactive Substances		
Natural Resources Wales	January 2015	Annually
Environment Agency - Welsh Region	June 2016	Annually
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	April 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	April 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency Wales - South East Area	January 2021	Quarterly
Natural Resources Wales	July 2021	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	July 2021	Quarterly
Natural Resources Wales	July 2021	Quarterly
Water Industry Act Referrals		
Natural Resources Wales	July 2021	Quarterly
Environment Agency - Welsh Region	October 2017	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Groundwater Vulnerability Map Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations Natural Resources Wales	January 2018	Annually
Source Protection Zones Natural Resources Wales	July 2017	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Flooding from Rivers or Sea without Defences Natural Resources Wales	September 2020	Quarterly
Areas Benefiting from Flood Defences Natural Resources Wales	November 2019	Quarterly
Flood Water Storage Areas Natural Resources Wales	August 2019	Quarterly
Flood Defences Natural Resources Wales	November 2019	Quarterly
OS Water Network Lines Ordnance Survey	July 2021	Quarterly
Surface Water 1 in 30 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 100 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water 1 in 1000 year Flood Extent Natural Resources Wales	May 2018	Annually
Surface Water Suitability Natural Resources Wales	February 2016	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	November 2002	Not Applicable
Historical Landfill Sites		
Natural Resources Wales	July 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	January 2009	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - South East Area	July 2021	Quarterly
Natural Resources Wales	July 2021	Quarterly
Licensed Waste Management Facilities (Locations)		
Natural Resources Wales	April 2021	Quarterly
Environment Agency Wales - South East Area	July 2021	Quarterly
Local Authority Landfill Coverage		
Monmouthshire Council - Environment	February 2003	Not Applicable
Newport City Council	February 2003	Not Applicable
Local Authority Recorded Landfill Sites		
Monmouthshire Council - Environment	October 2018	
Newport City Council	October 2018	
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	
Registered Landfill Sites		
Environment Agency Wales - South East Area	March 2006	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - South East Area	April 2018	
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - South East Area	June 2015	
Hazardous Substances	**Version**	**Update Cycle**
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	August 2001	
Planning Hazardous Substance Enforcements		
Monmouthshire Council - Environment	February 2016	Variable
Newport City Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
Monmouthshire Council - Environment	February 2016	Variable
Newport City Council - Planning Department	October 2015	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	December 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2021	Bi-Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	As notified
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually
Industrial Land Use	**Version**	**Update Cycle**
Contemporary Trade Directory Entries Thomson Directories	July 2021	Quarterly
Fuel Station Entries Catalist Ltd - Experian	August 2021	Quarterly
Gas Pipelines National Grid	October 2021	Annually
Points of Interest - Commercial Services PointX	September 2021	Quarterly
Points of Interest - Education and Health PointX	September 2021	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2021	Quarterly
Points of Interest - Public Infrastructure PointX	September 2021	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2021	Quarterly
Underground Electrical Cables National Grid	May 2021	Annually

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural Resources Wales	September 2018	Bi-Annually
Areas of Adopted Green Belt		
Monmouthshire Council	October 2020	Quarterly
Newport City Council	October 2020	Quarterly
Areas of Unadopted Green Belt		
Monmouthshire Council	October 2020	Quarterly
Newport City Council	October 2020	Quarterly
Areas of Outstanding Natural Beauty		
Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Monmouthshire Council	August 2018	Bi-Annually
Newport City Council	August 2018	Bi-Annually
Marine Nature Reserves		
Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves		
Natural Resources Wales	July 2019	Bi-Annually
National Parks		
Natural Resources Wales	February 2018	Annually
Nitrate Vulnerable Zones		
The National Assembly for Wales - GI Services (Department of Planning & Countryside)	April 2016	
Natural Resources Wales	July 2019	Bi-Annually
Ramsar Sites		
Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest		
Natural Resources Wales	March 2020	Bi-Annually
Special Areas of Conservation		
Natural Resources Wales	August 2020	Bi-Annually
Special Protection Areas		
Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

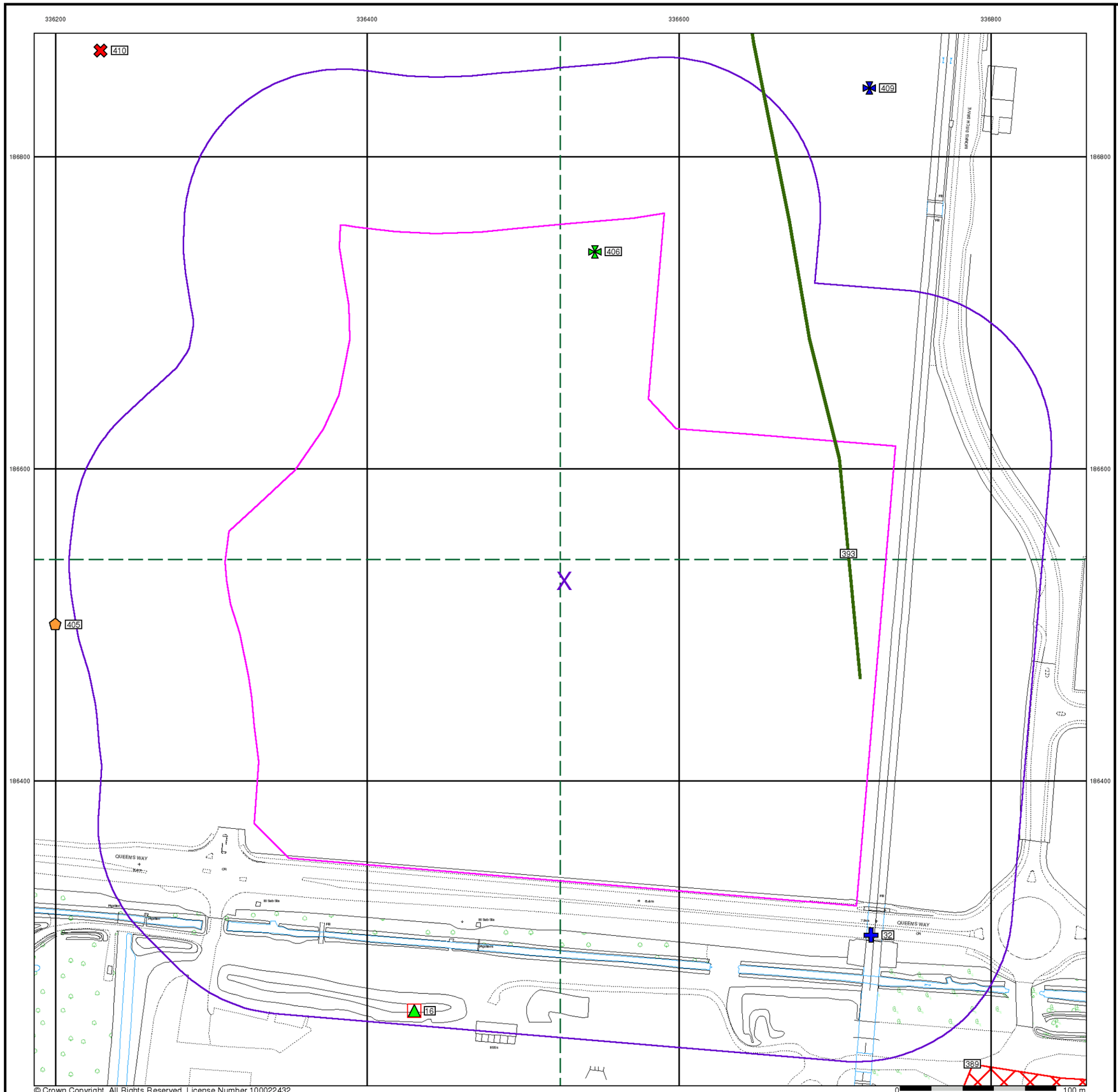
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
4	**Newport City Council - Public Protection and Environmental Services** Civic Centre, Newport, Gwent, NP20 4UR	Telephone: 01633 656656 Fax: 01633 232429 Website: www.newport.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**Newport City Council** Civic Centre, Newport, South Wales, NP9 4UR	Telephone: 01633 656656 Fax: 01633 244721 Website: www.newport.gov.uk
7	**Health and Safety Executive** 5S.2 Redgrave Court, Merton Road, Bootle, L20 7HS	Website: www.hse.gov.uk
8	**Newport City Council - Planning Department** Civic Centre, Newport, South Wales, NP9 4UR	Telephone: 01633 656656 Fax: 01633 244721 Website: www.newport.gov.uk
9	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
10	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9966 Fax: 0844 844 9951 Email: helpdesk@landmark.co.uk Website: www.landmark.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

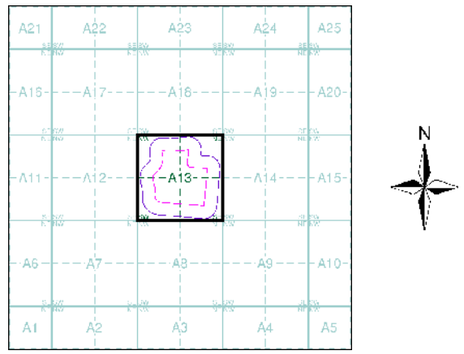
Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

Geological

- BGS Recorded Mineral Site

Site Sensitivity Map - Segment A13



Order Details

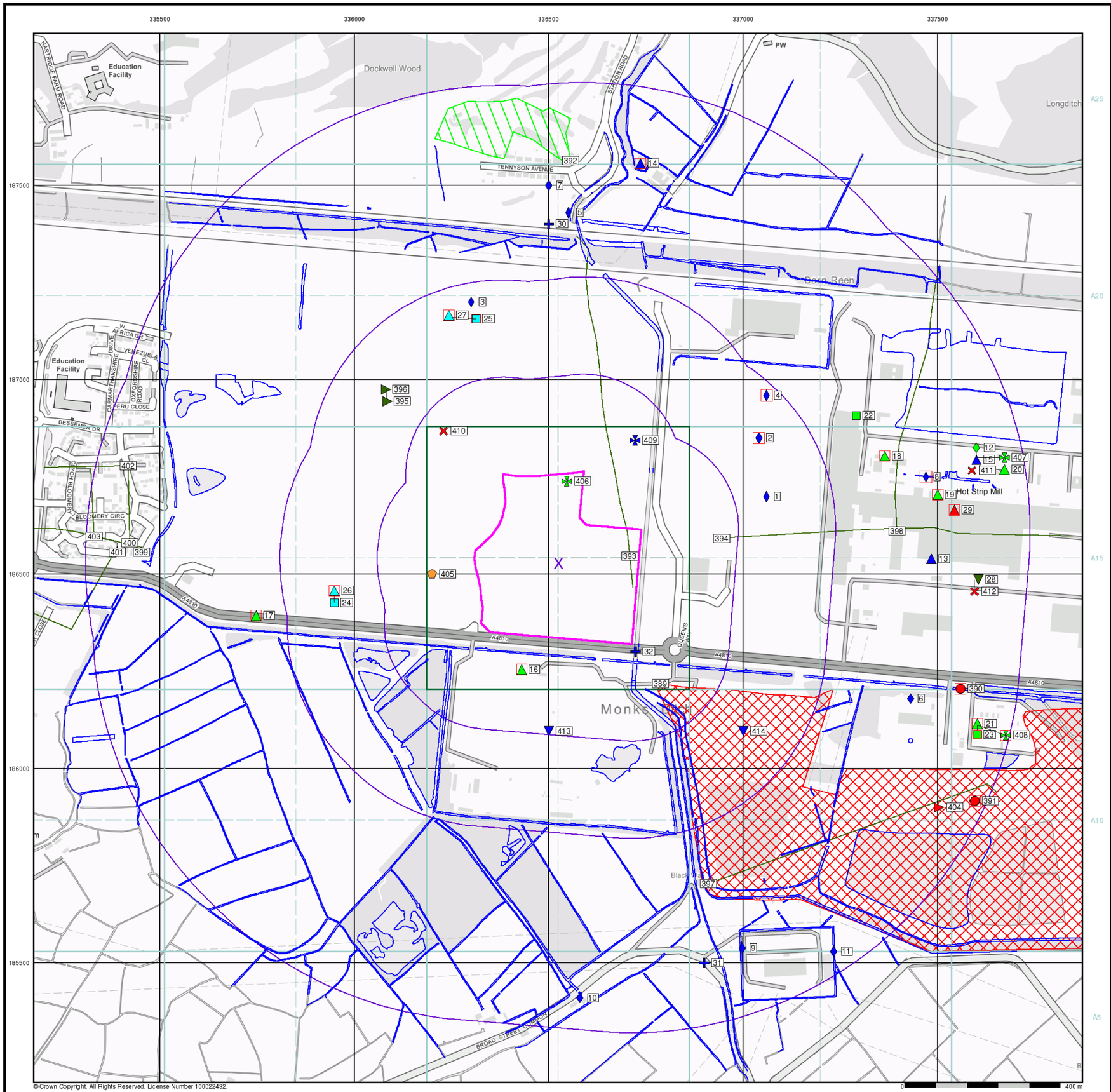
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Plot Buffer (m):	100

Site Details

Site at 336524,186542

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- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

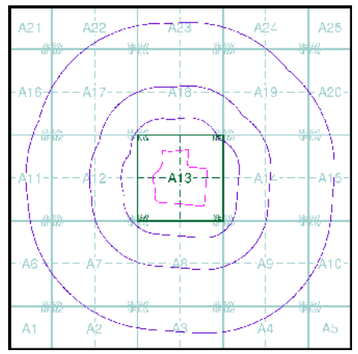
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



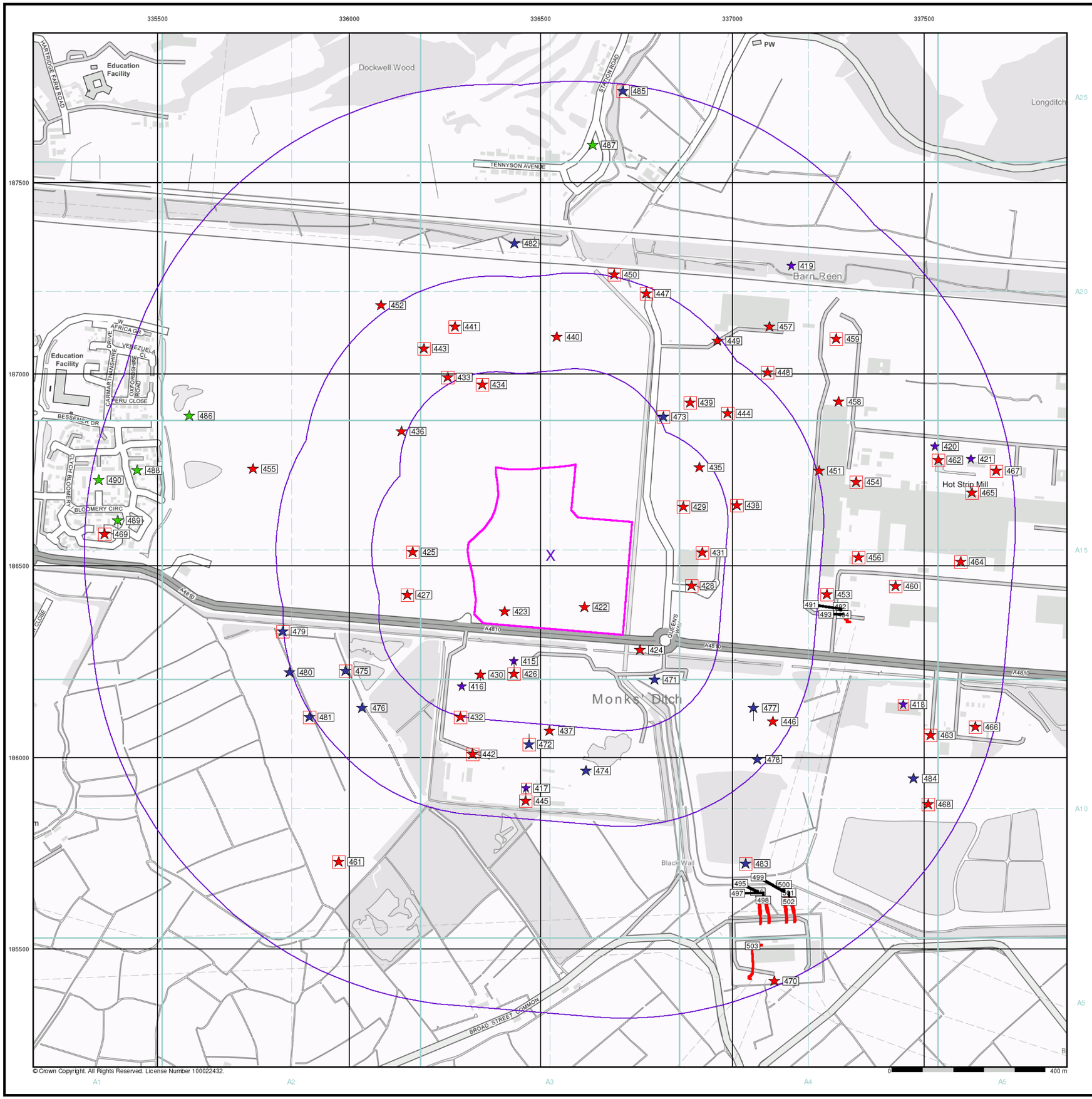
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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

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Industrial Land Use Map

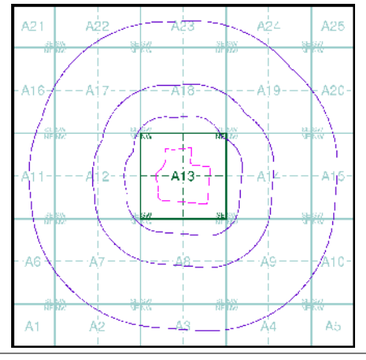
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



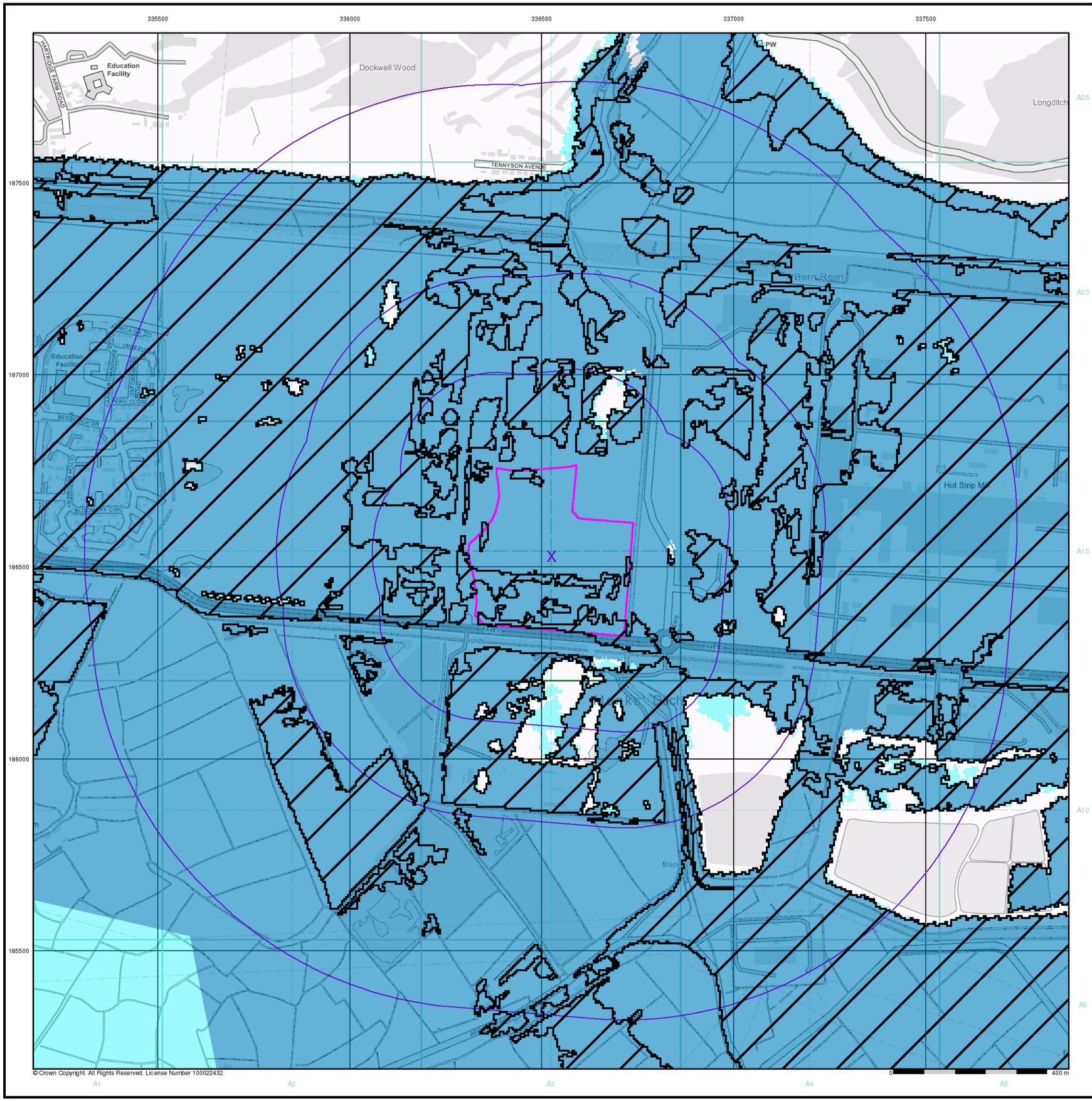
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

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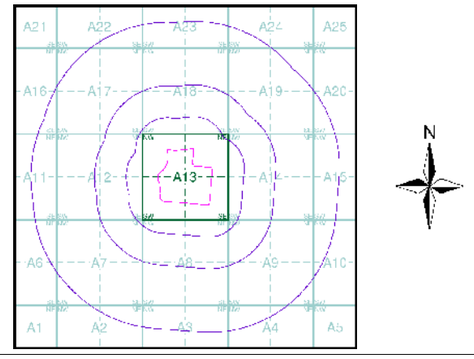
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

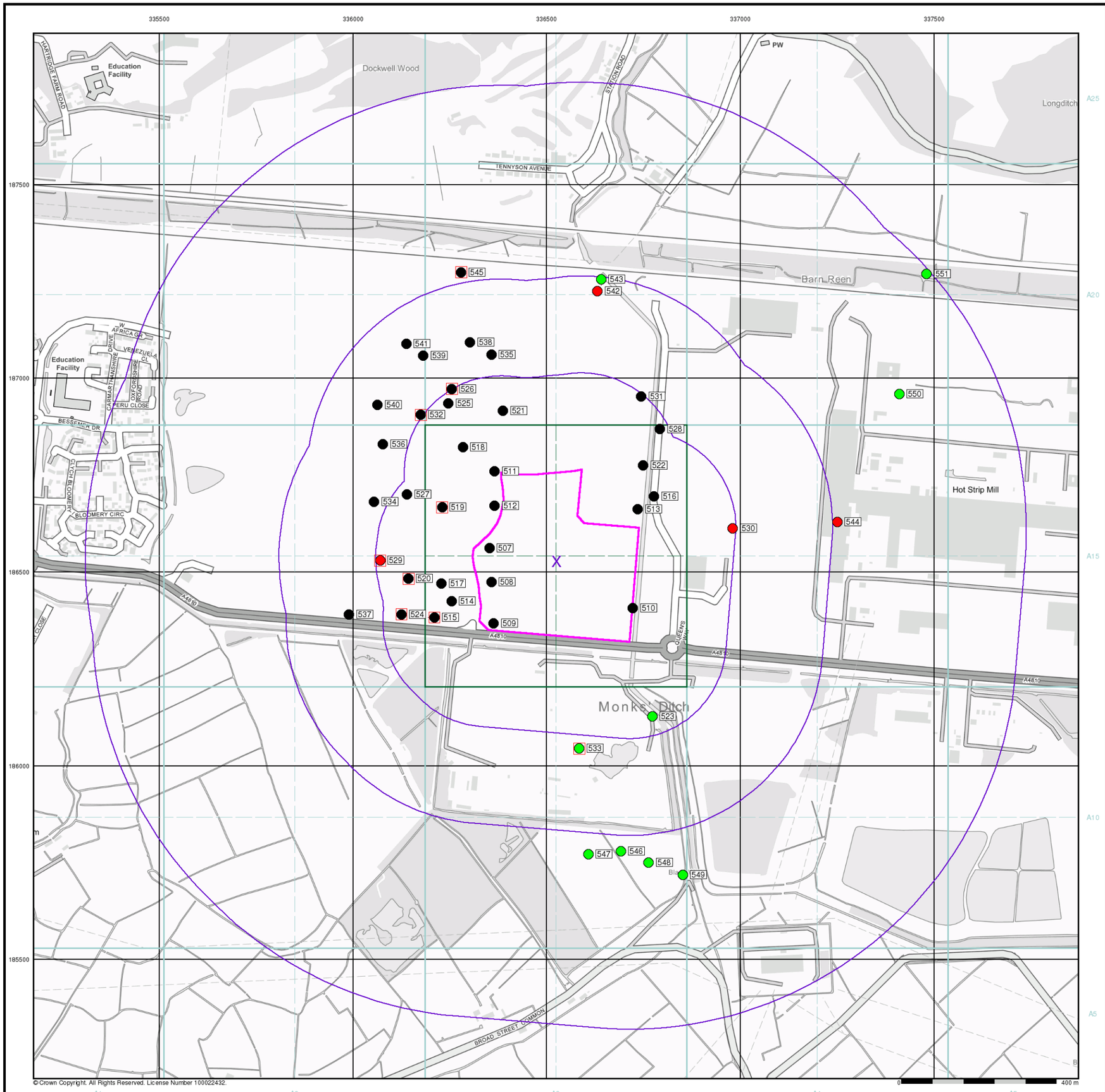
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

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- Bearing Reference Point
- Map ID
- Several of Type at Location

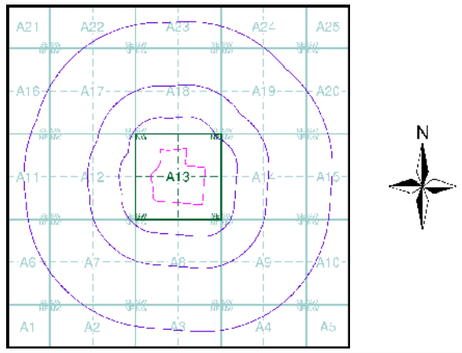
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

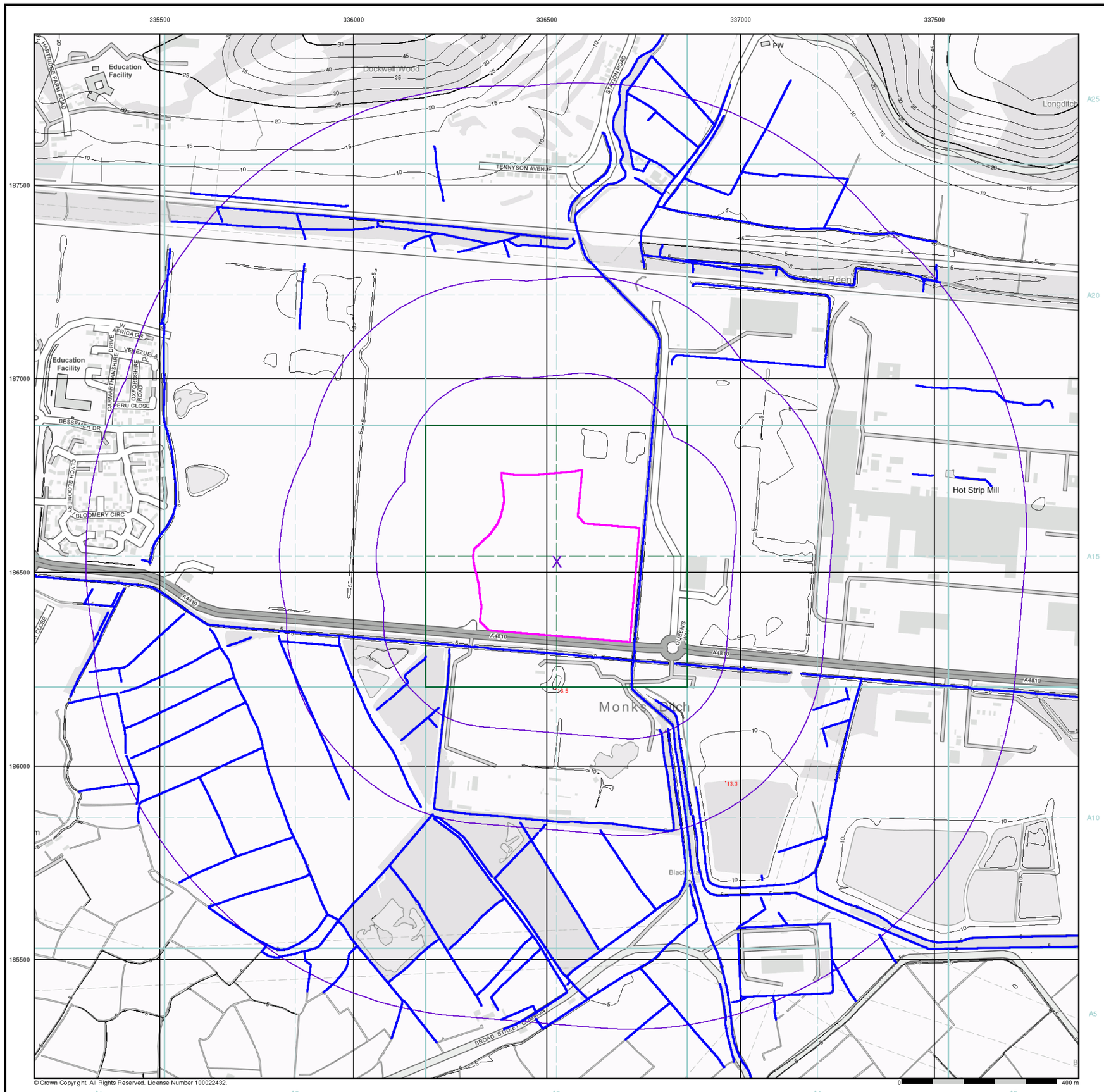
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

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- Specified Buffer(s)
- Bearing Reference Point

OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

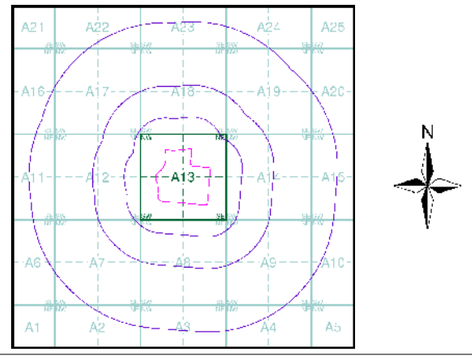
Standard Contour 105 100 95

Master Contour

Spot Height 167.3

- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



Order Details

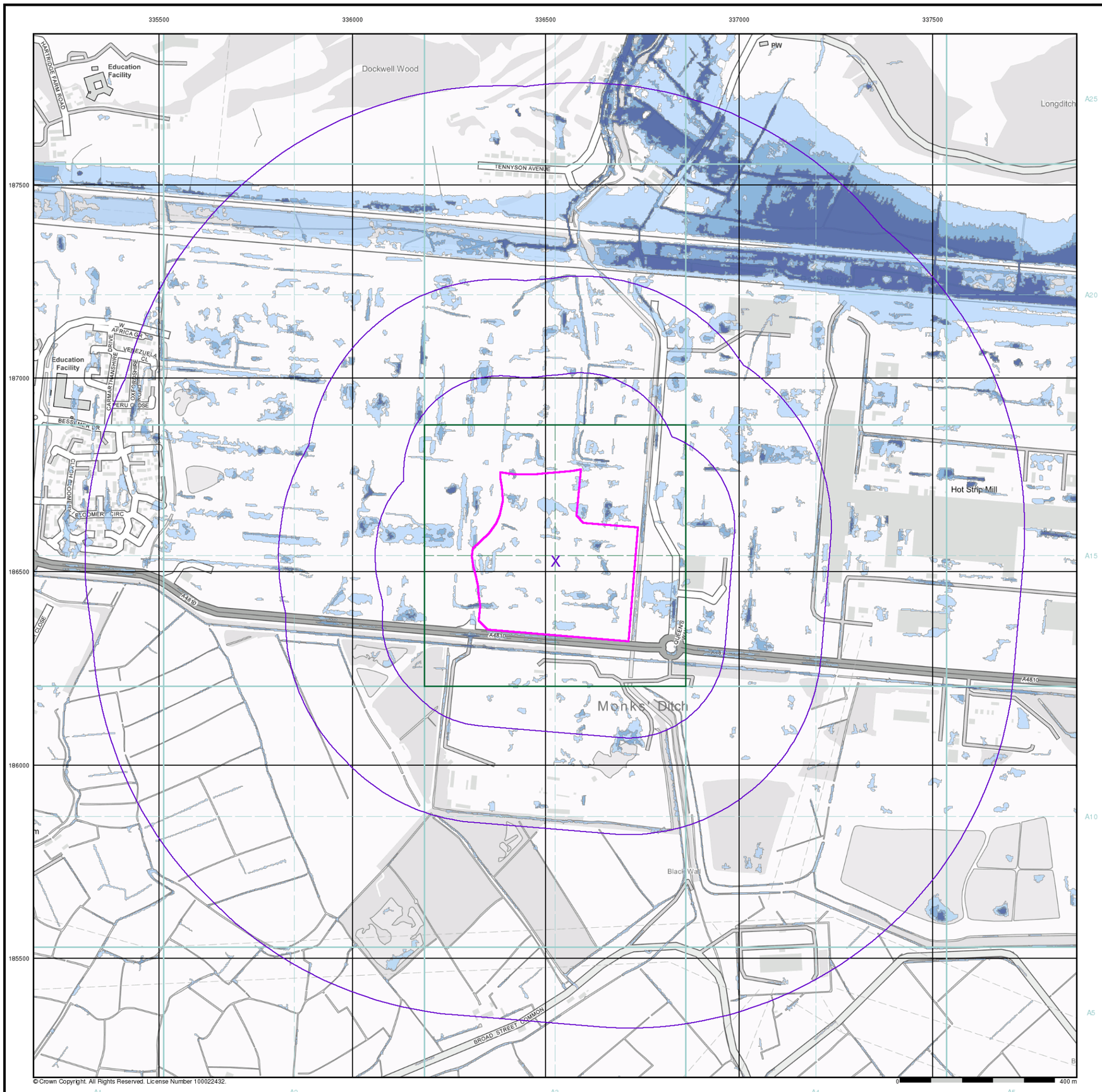
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Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

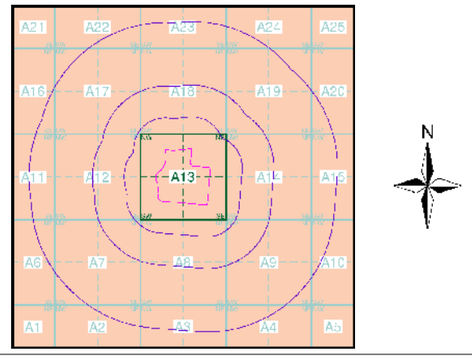
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

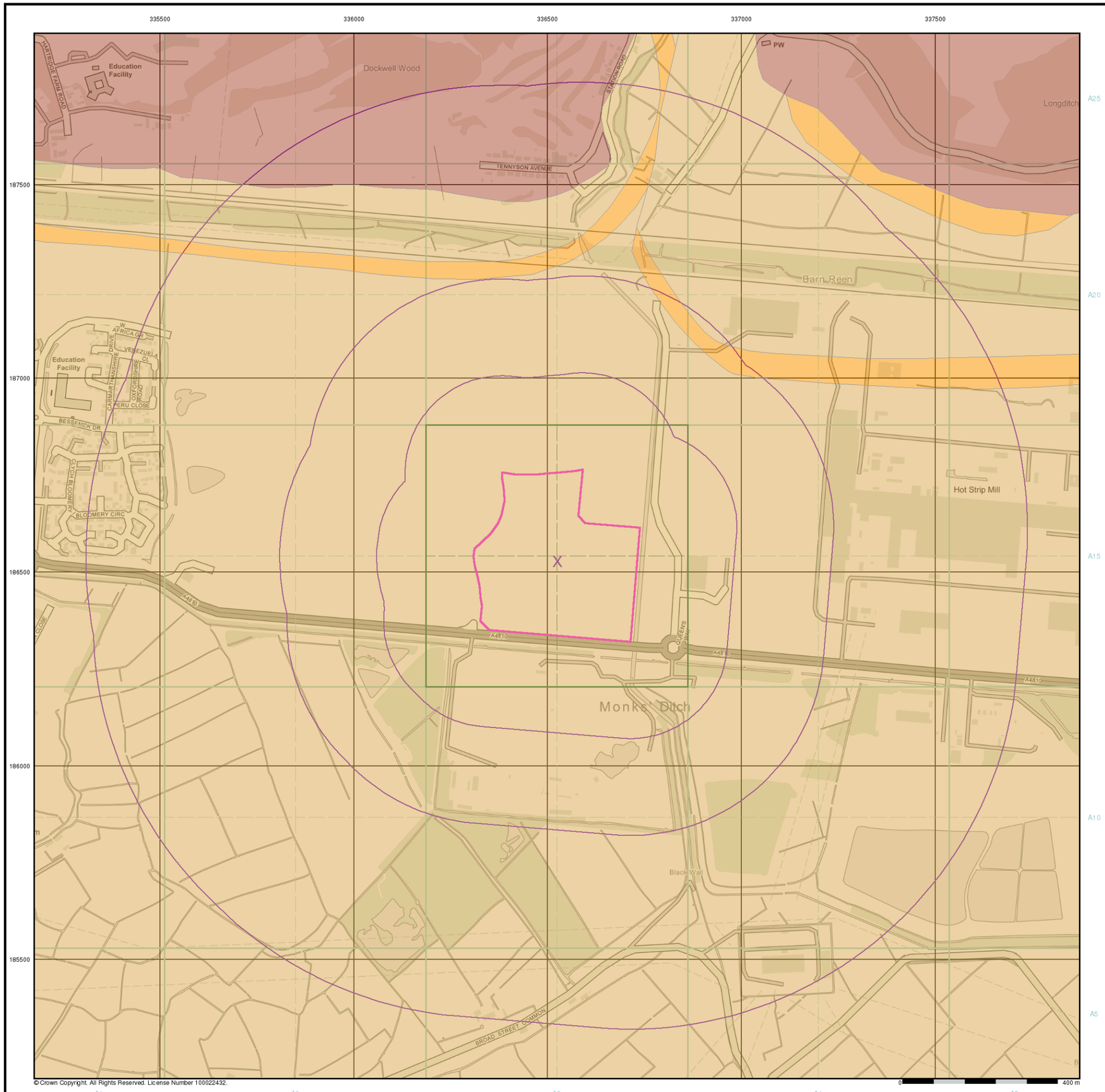
Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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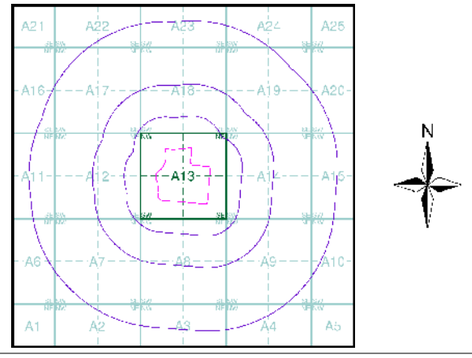
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



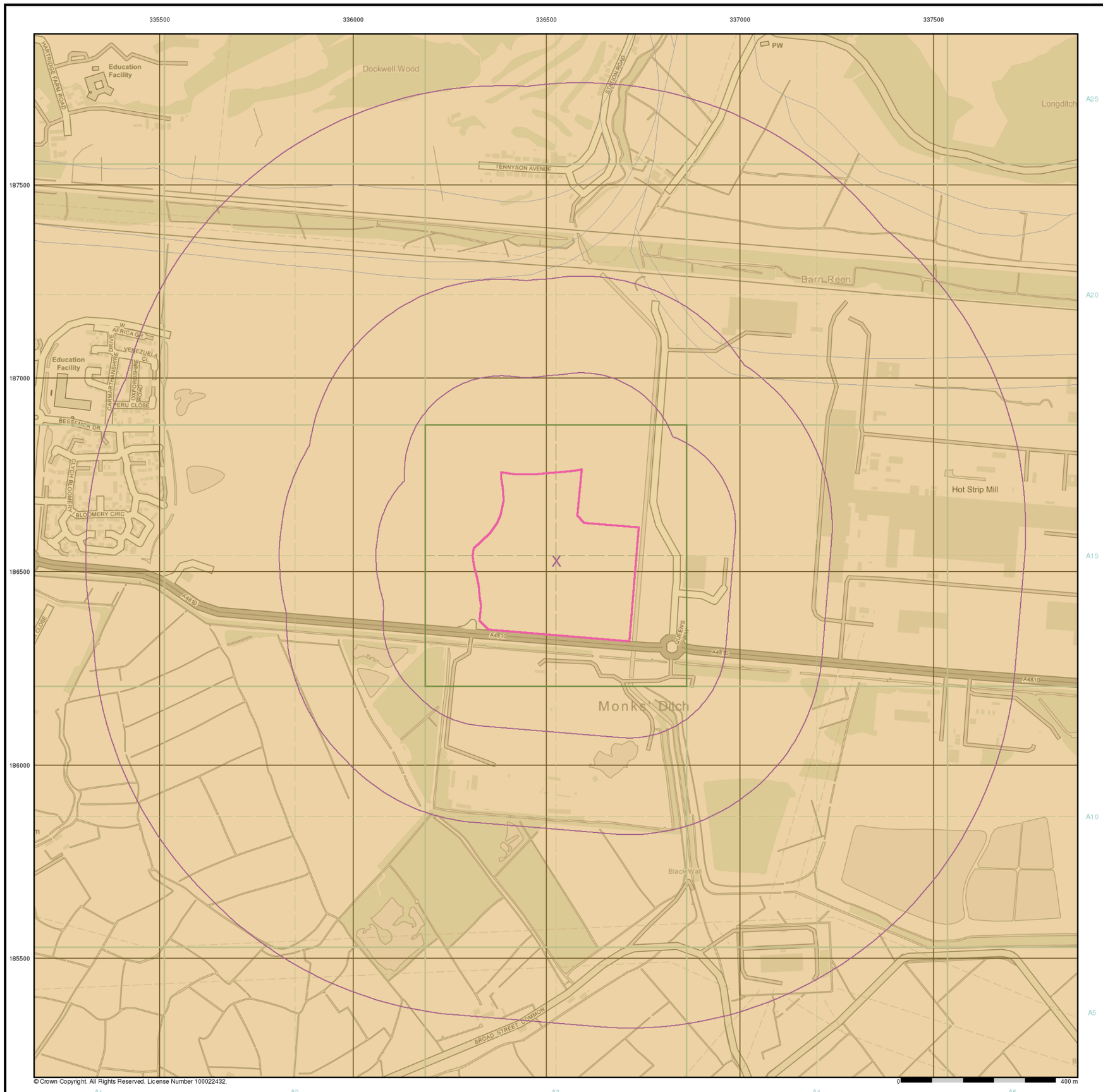
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National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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A1 A2 A3 A4 A5

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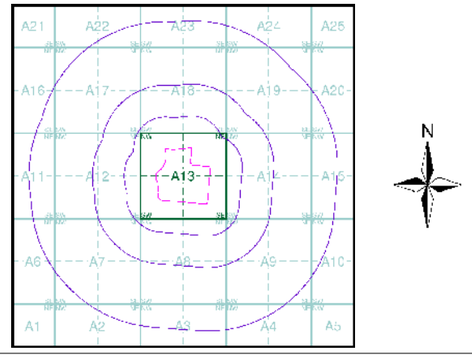
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

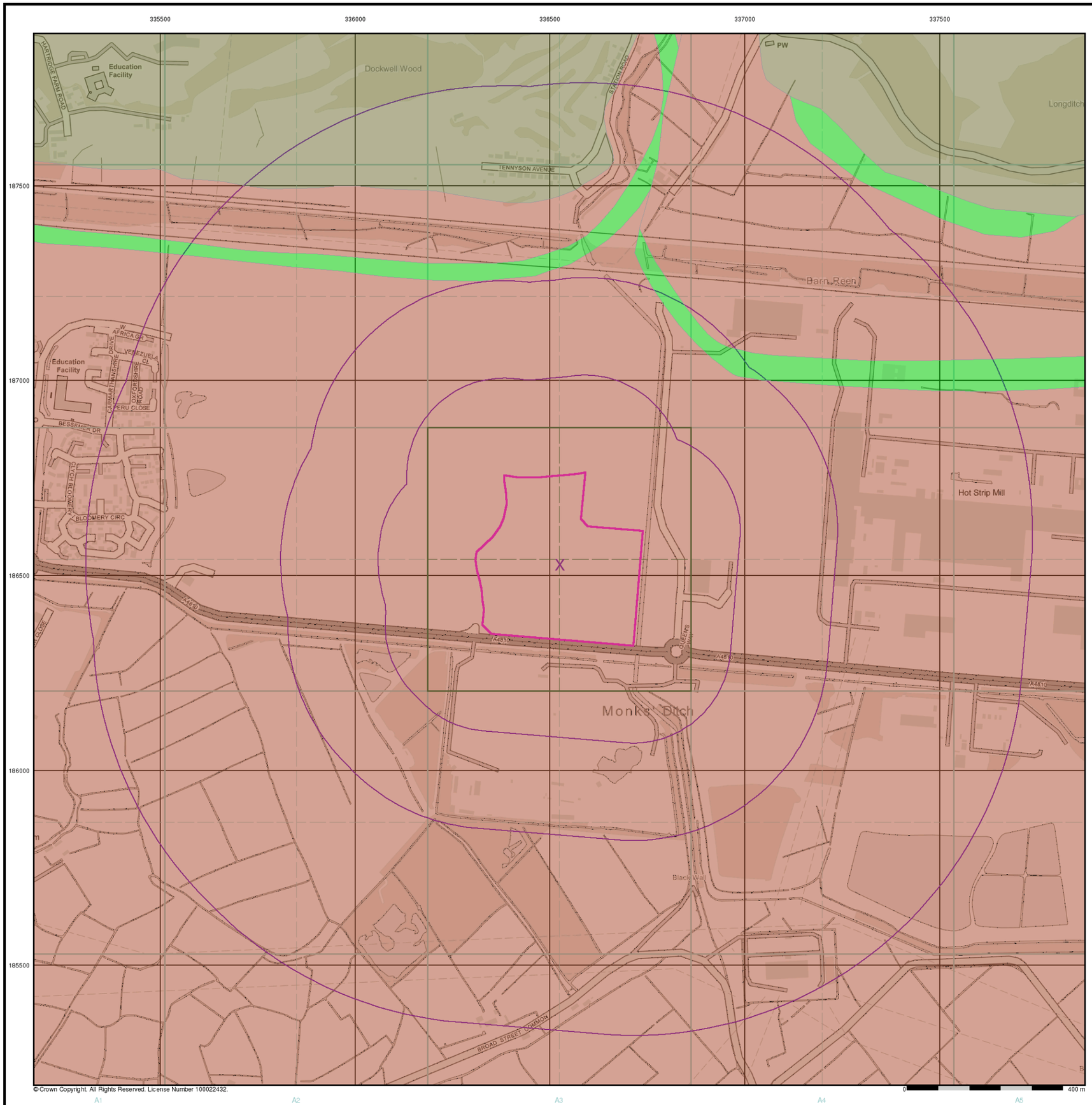
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Customer Ref:	P18-669 5e1/5e2
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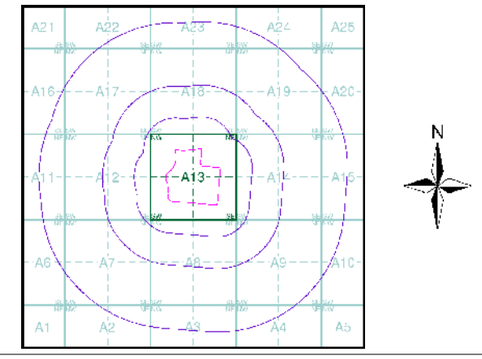
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

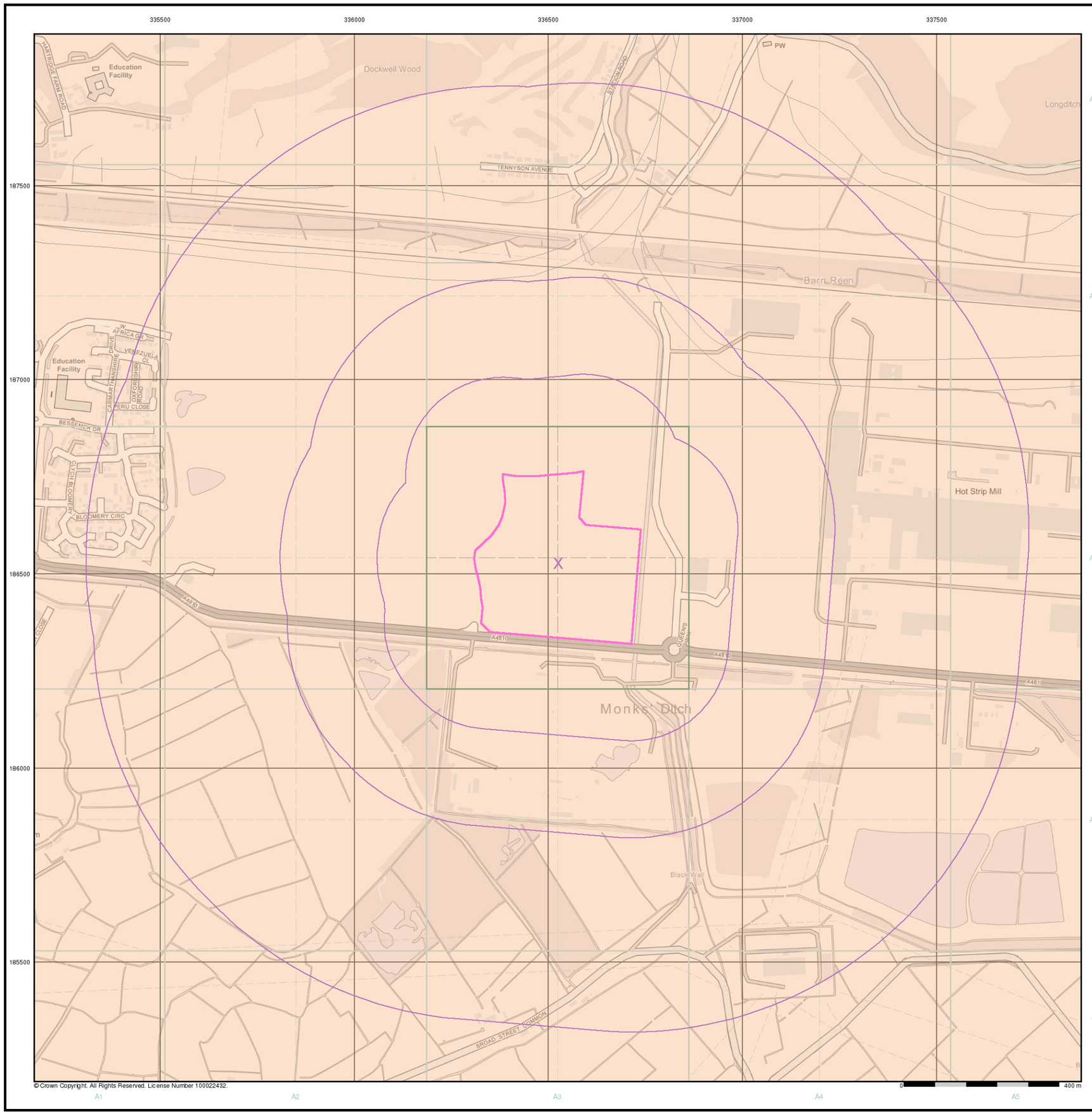
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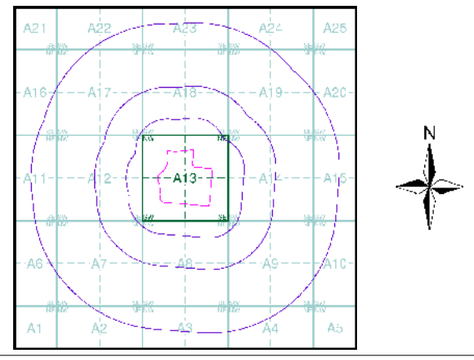
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



Order Details

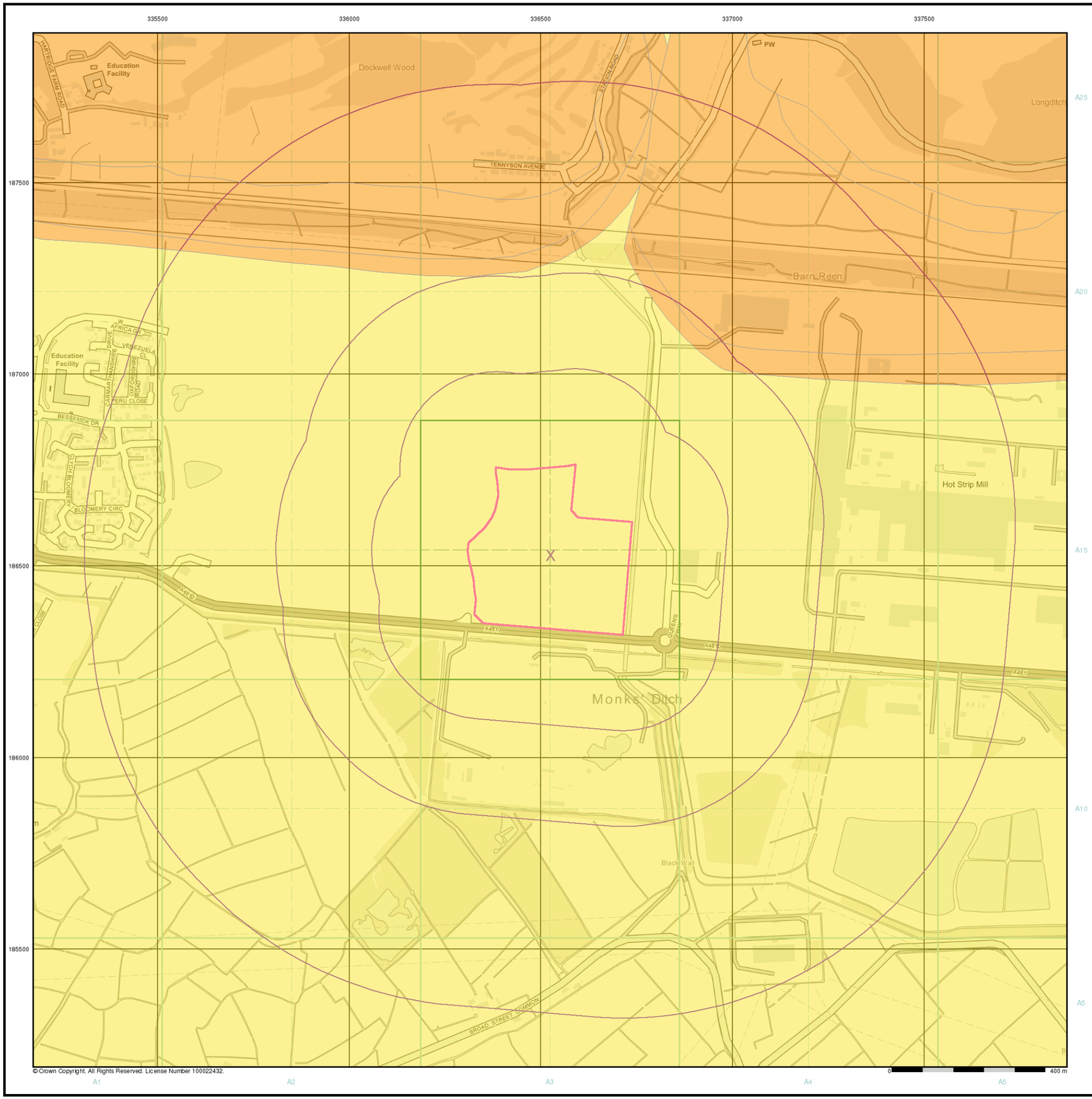
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Customer Ref:	P18-669 5e1/5e2
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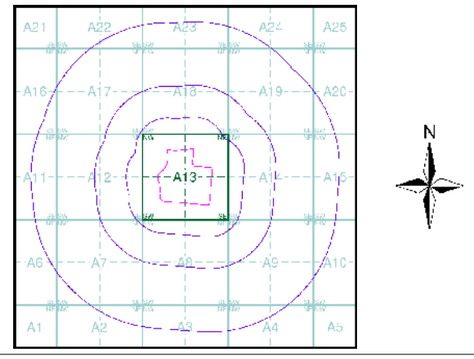
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



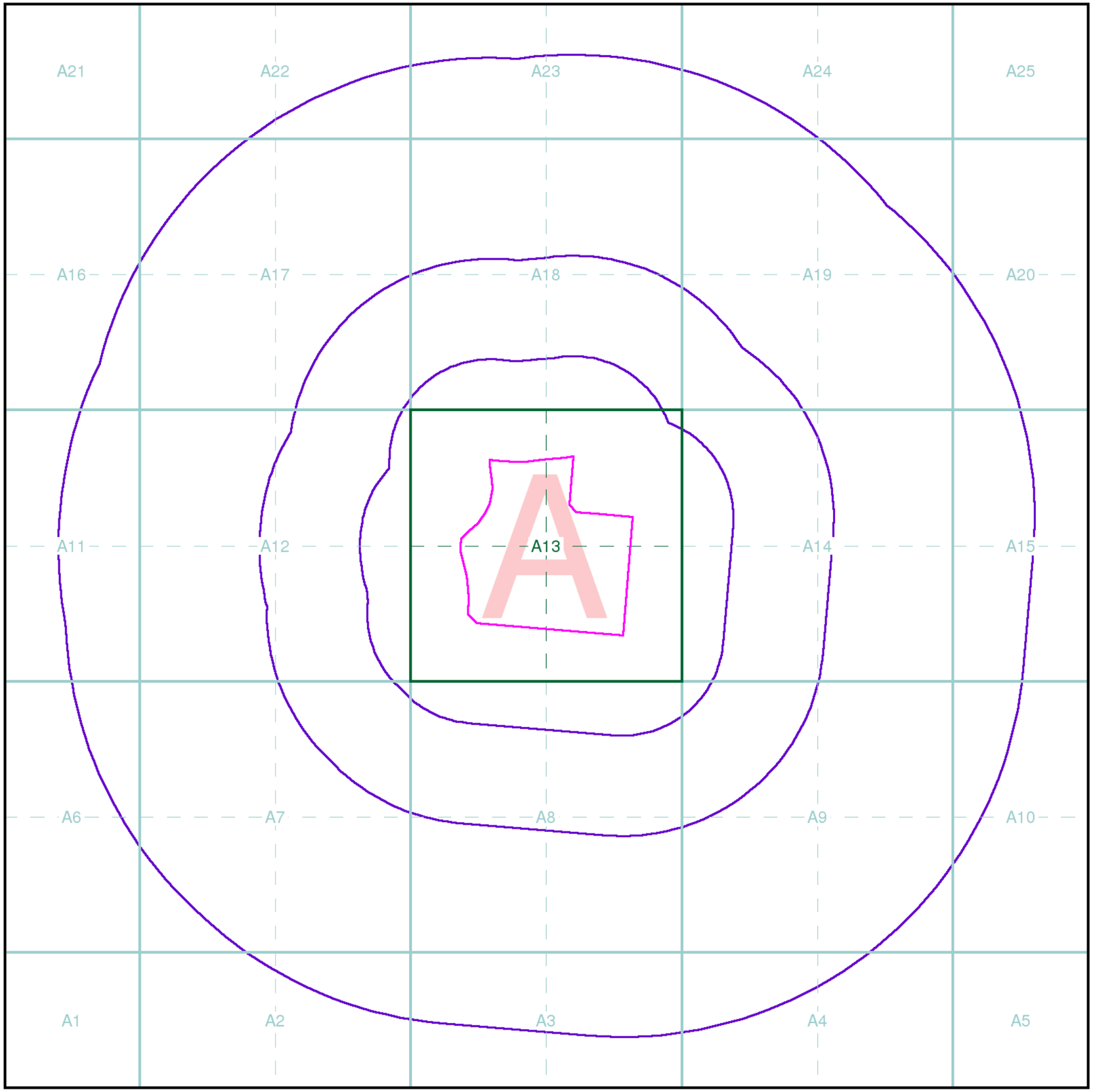
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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr R Taylor, Rodgers Leask Ltd, Rodgers Leask Ltd,
Seven House, 18 High Street, Longbridge, Birmingham,
B31 2UQ

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Geology 1:50,000 Maps Legends

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	TFD	Tidal Flat Deposits	Clay and Silt	Not Supplied - Holocene
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	LVN	Lavernock Shales Member	Mudstone	Not Supplied - Hettangian
	PNG	Penarth Group	Mudstone	Not Supplied - Rhaetian
	STM	St Mary's Well Bay Member	Limestone and Mudstone, Interbedded	Not Supplied - Rhaetian
	BAN	Blue Anchor Formation	Mudstone and Siltstone	Not Supplied - Norian
	BAN	Blue Anchor Formation	Mudstone	Not Supplied - Norian
	MMG	Mercia Mudstone Group	Mudstone	Not Supplied - Early Triassic
		Faults		

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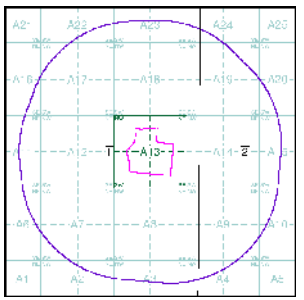
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID:	**2**	**Map ID:**	**1**
Map Sheet No:	**250**	**Map Sheet No:**	**249**
Map Name:	**Chepstow**	**Map Name:**	**Newport**
Map Date:	**1981**	**Map Date:**	**1969**
Bedrock Geology:	**Available**	**Bedrock Geology:**	**Available**
Superficial Geology:	**Available**	**Superficial Geology:**	**Available**
Artificial Geology:	**Not Available**	**Artificial Geology:**	**Available**
Faults:	**Not Supplied**	**Faults:**	**Not Supplied**
Landslip:	**Available**	**Landslip:**	**Available**
Rock Segments:	**Not Supplied**	**Rock Segments:**	**Not Supplied**

Geology 1:50,000 Maps - Slice A

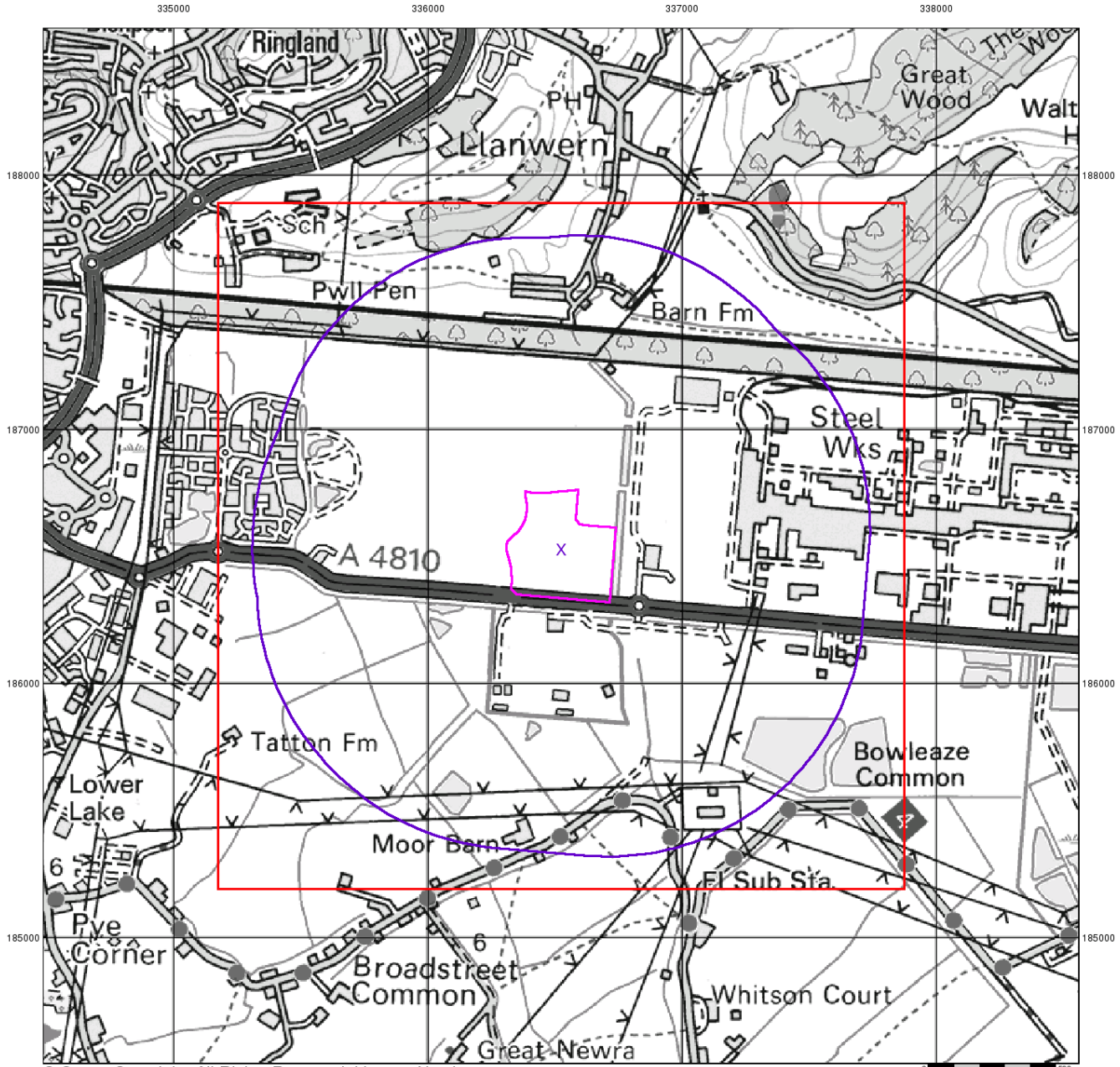


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Artificial Ground and Landslip

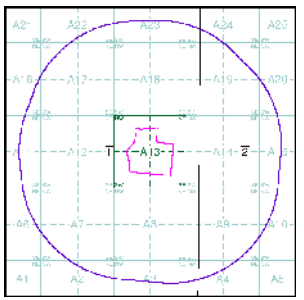
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



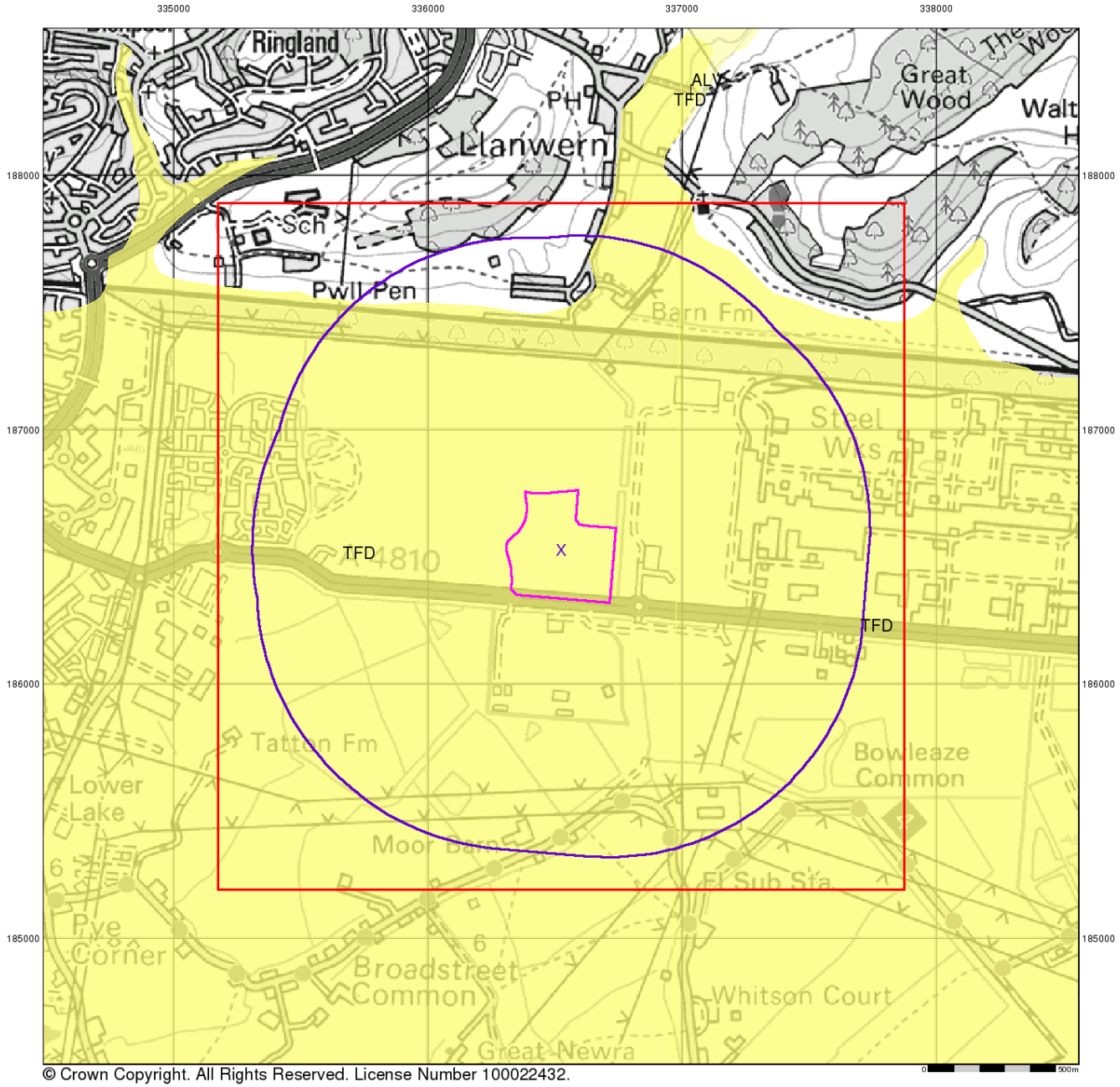
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National Grid Reference:	336530, 186530
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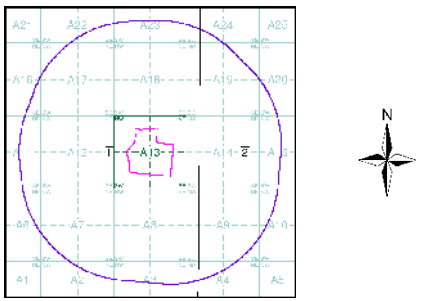
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



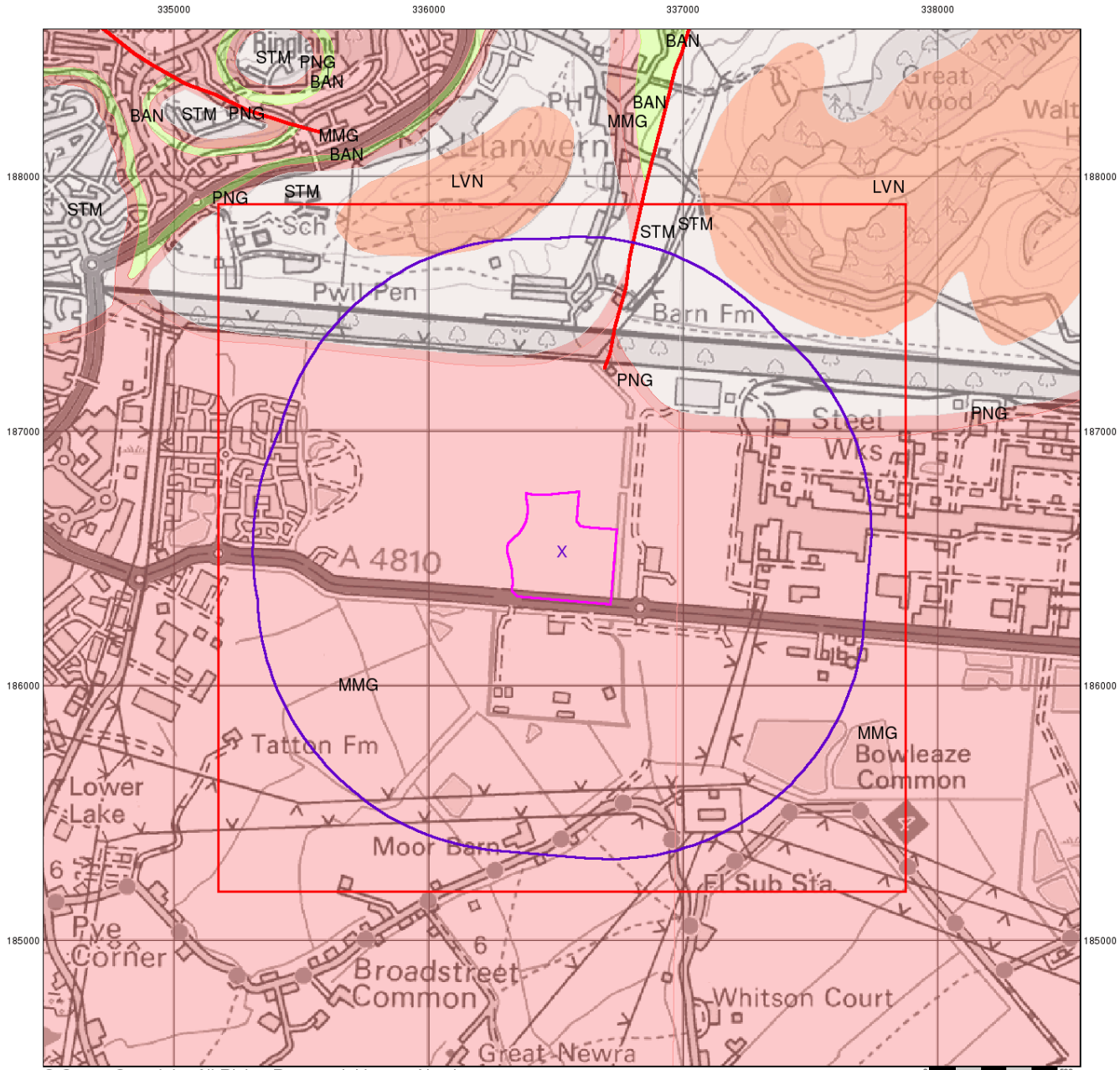
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Bedrock and Faults

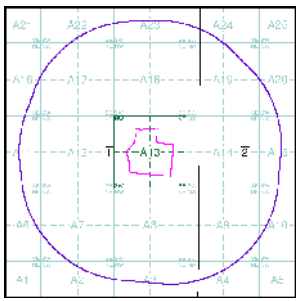
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



N

Order Details:

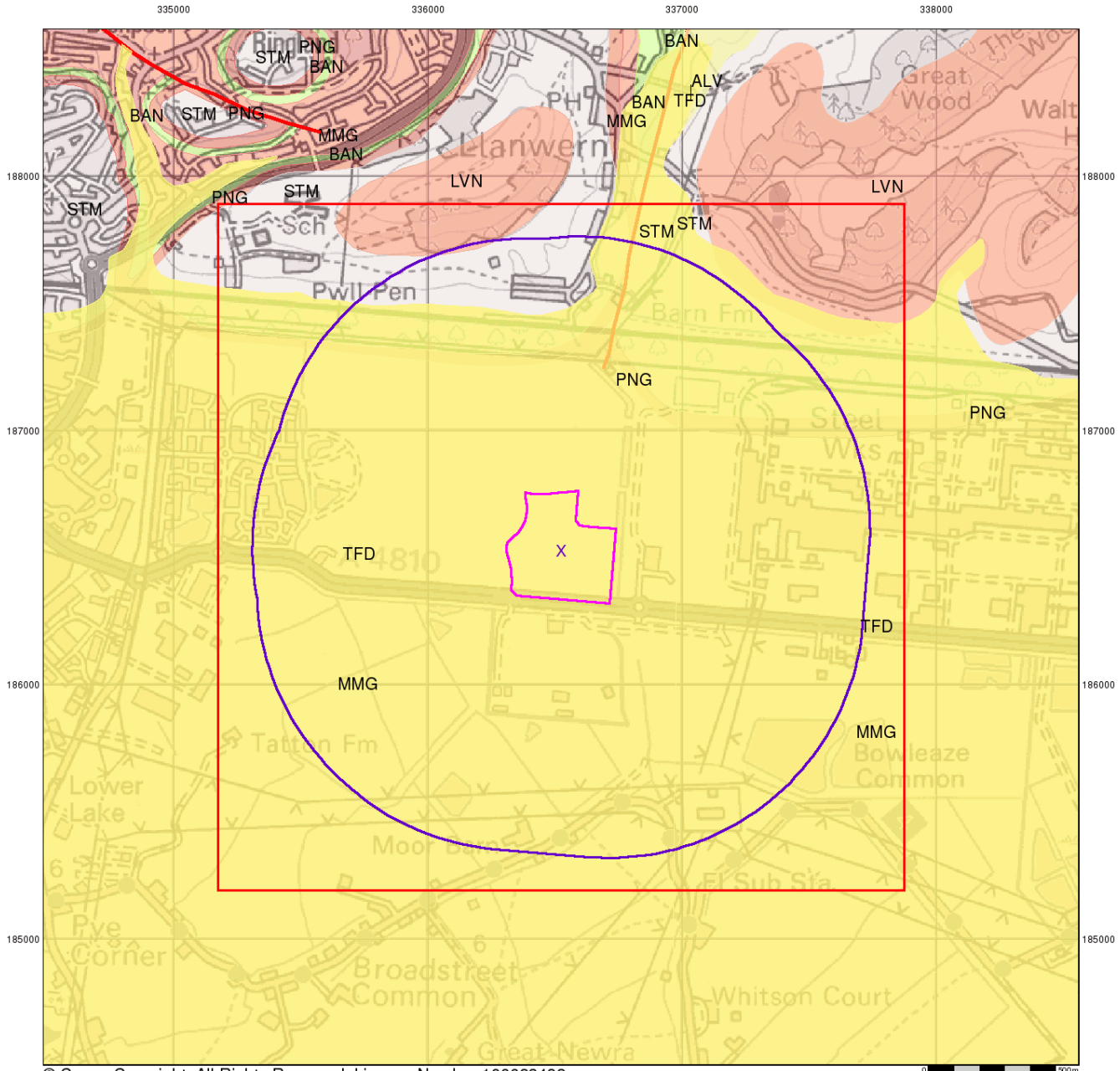
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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

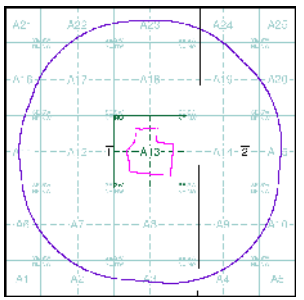
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A

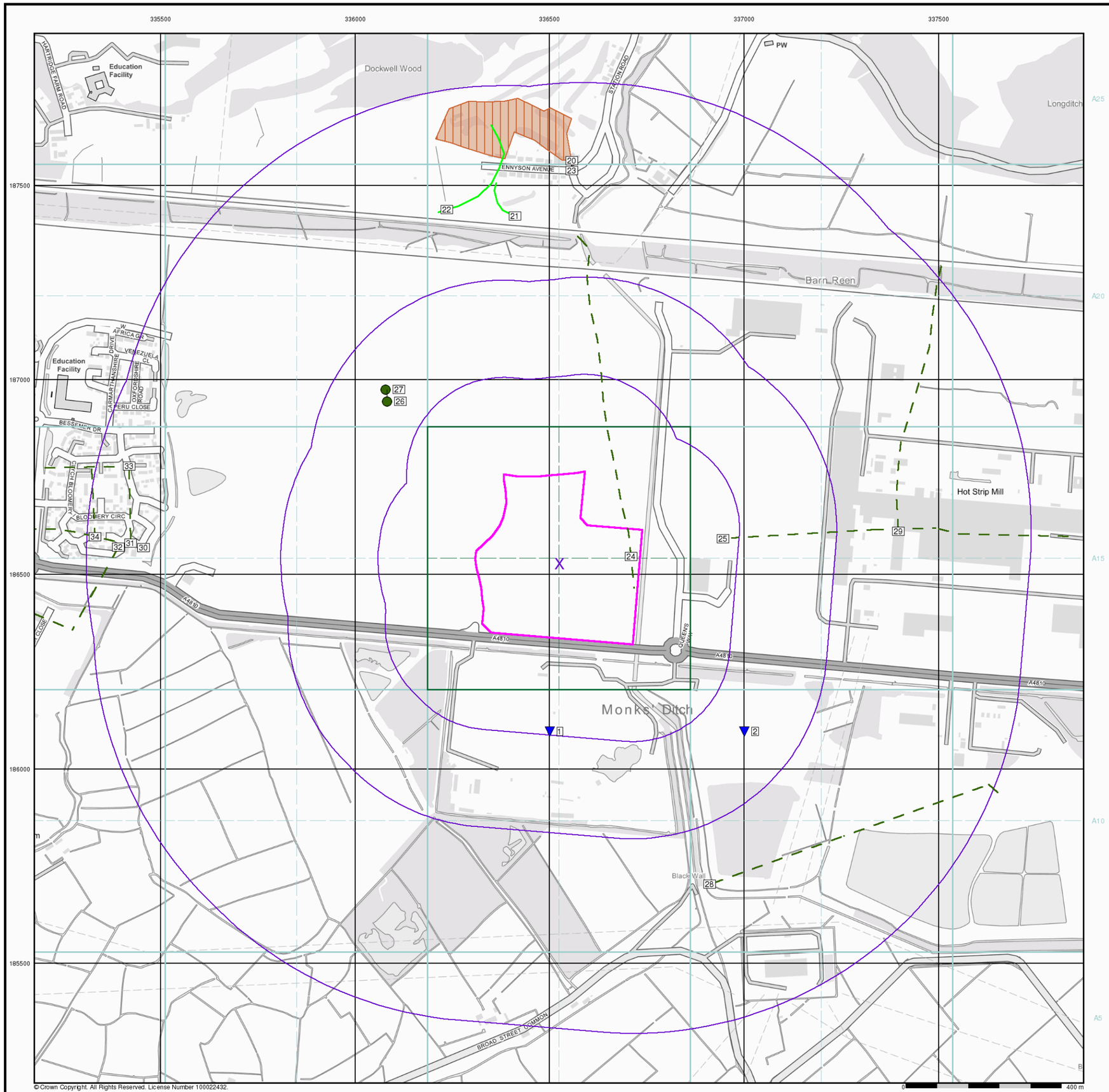


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Historical Land Use Information (1:10,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

Potentially Contaminative Industrial Uses (Past Land Uses - Mining)

	Point	Line	Polygon
Air Shafts	◆		
Disturbed Ground	◆		
General Quarrying	◆		
Heap, unknown constituents	◆		
Mineral Railway	◆		
Mining and Quarrying General	◆		
Mining of Coal & Lignite	◆		
Quarrying of Sand and Clay, Operation of Sand and Gravel Pits	◆		

Historical Land Use

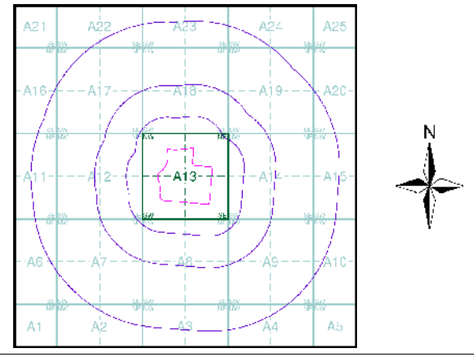
	Point	Line	Polygon
Potentially Infilled Land (Non-Water)	●		
Potentially Infilled Land (Water)	●		
Former Marsh	✠		

Mining Data

Potential Mining Area

BGS Recorded Mineral Site

Mining and Ground Stability - Slice A



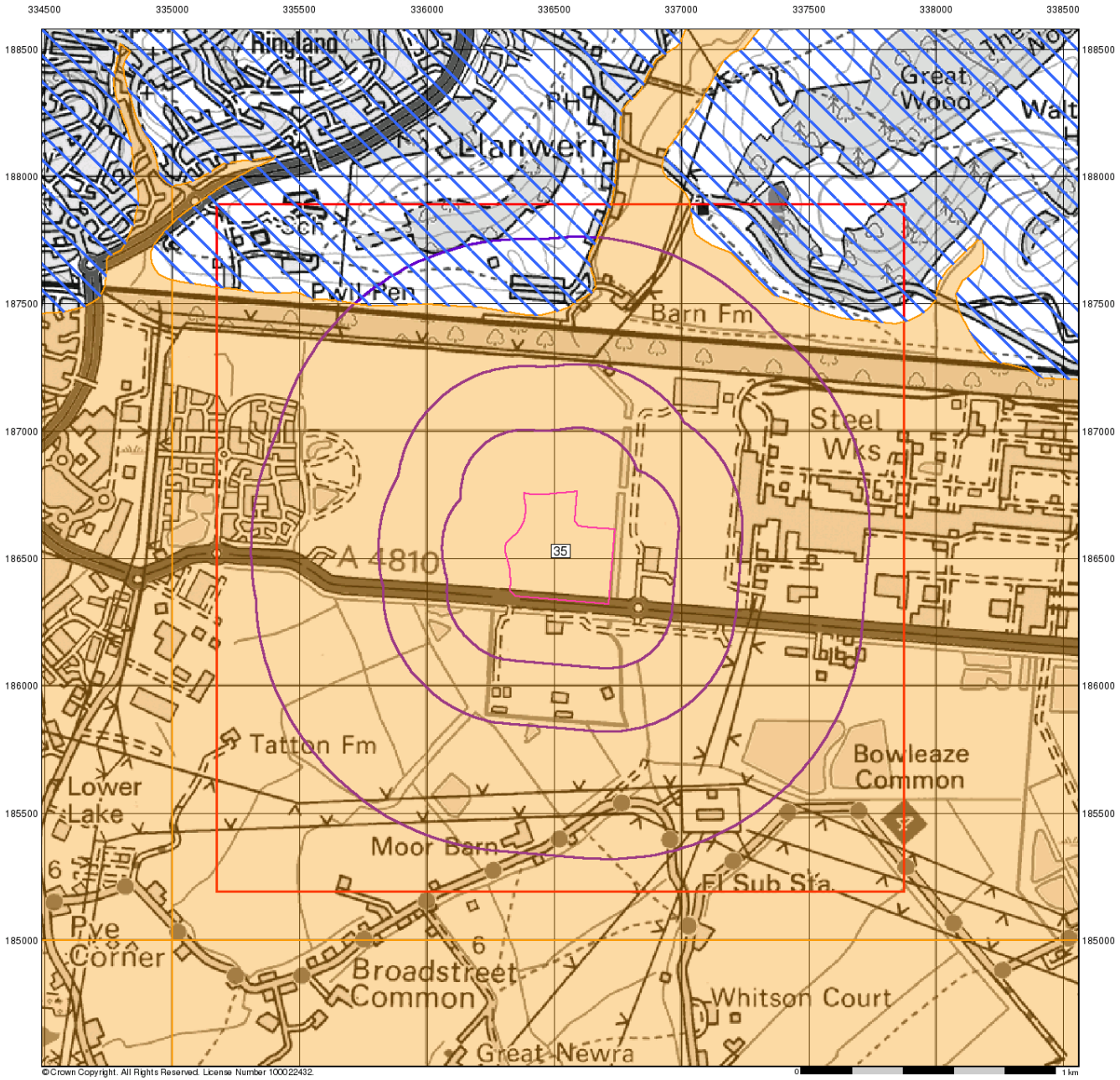
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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Potential for Compressible Ground Stability Hazards

High | Low | Moderate | Very Low

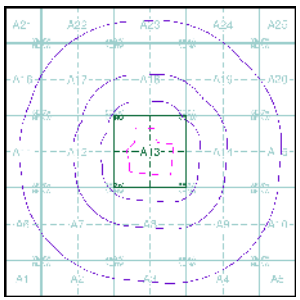
Potential for Collapsible Ground Stability Hazards

High | Low | Moderate | Very Low

Brine Pumping and Salt Mining

	Point	Polygon
Brine Pumping Related Feature	▲	▨
Salt Mining Related Feature	▲	▨

Mining and Ground Stability - Slice A



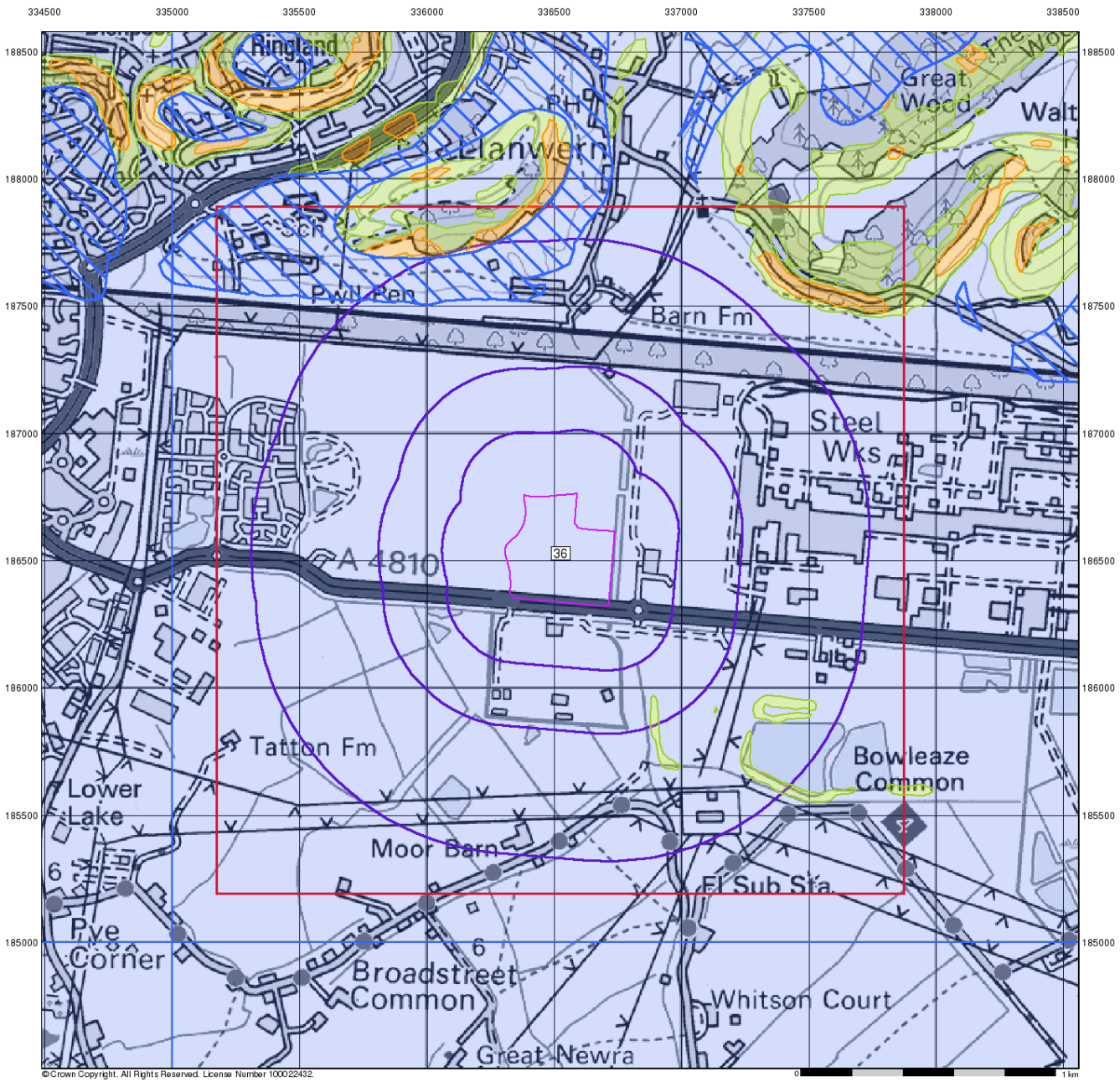
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Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

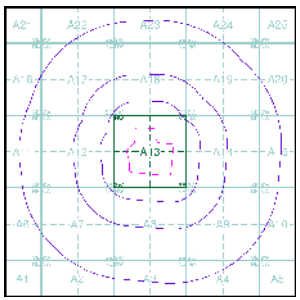
Potential for Landslide Ground Stability Hazards

High | Low | Moderate | Very Low

Potential for Ground Dissolution Stability Hazards

High | Low | Moderate | Very Low

Mining and Ground Stability - Slice A



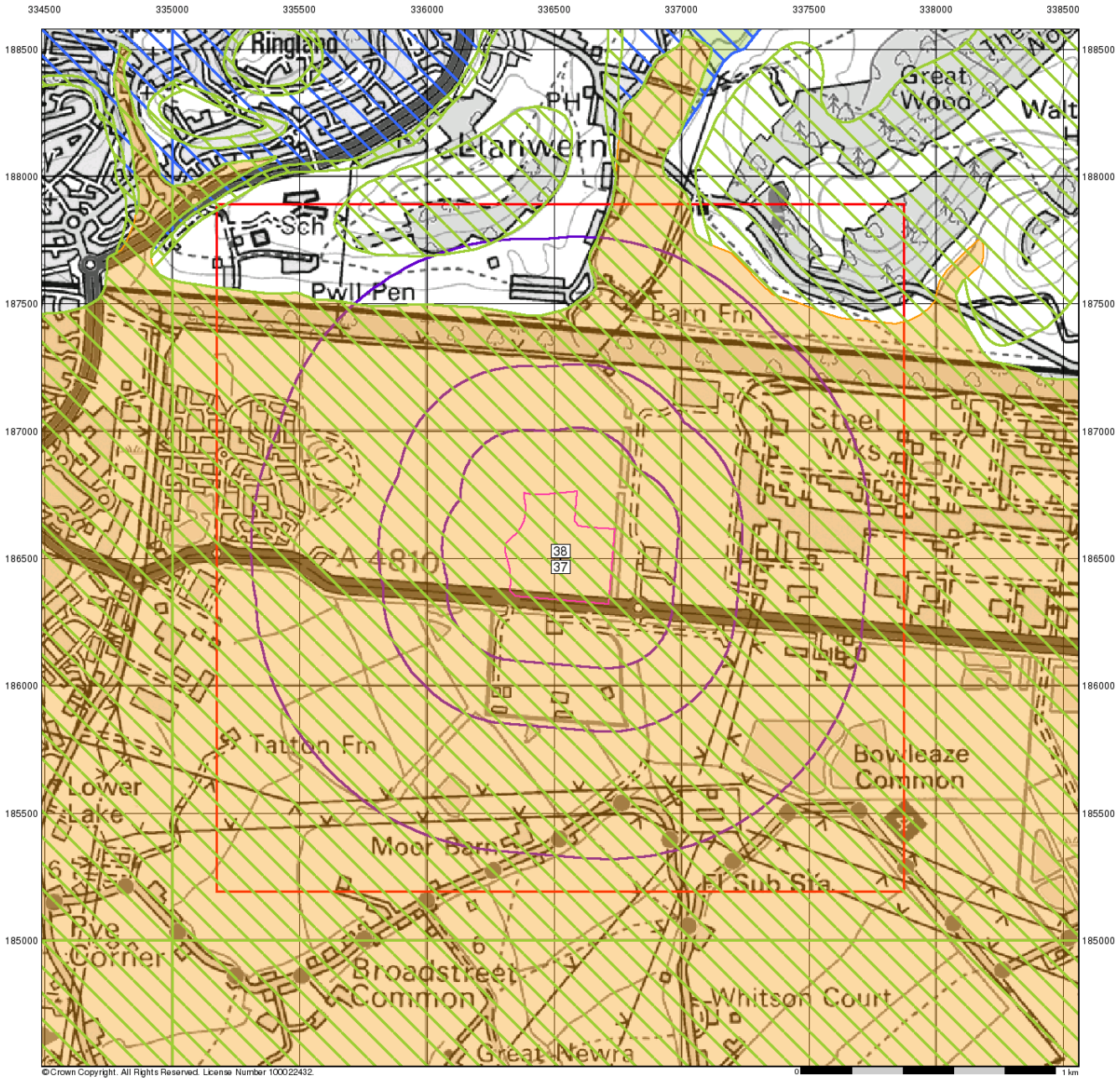
Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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Ground Stability Data (1:50,000)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

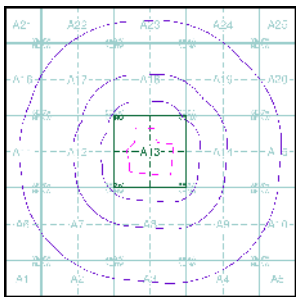
Potential for Running Sand Ground Stability Hazards

High | Low
Moderate | Very Low

Potential for Shrinking or Swelling Clay Ground Stability Hazards

High | Low
Moderate | Very Low

Mining and Ground Stability - Slice A



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Search Buffer (m):	1000

Site Details

Site at 336524,186542

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Web: www.envirocheck.co.uk

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Envirocheck® Report:

Mining and Ground Stability Datasheet

Order Details:

Order Number:
287158115_1_1

Customer Reference:
P18-669 5e1/5e2

National Grid Reference:
336530, 186530

Slice:
A

Site Area (Ha):
14.1

Search Buffer (m):
1000

Site Details:

Site at 336524,186542

Client Details:

Mr R Taylor
Rodgers Leask Ltd
Rodgers Leask Ltd
Seven House
18 High Street
Longbridge
Birmingham
B31 2UQ

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Contents

Report Section and Details	Page Number
Summary	-
The Summary section provides an overview of the data contained within the report, detailing the number of data set features or the existence of a data set in relation to the buffer selected. For ease of reference, the report is broken down into 4 sections of data; Mining and Natural Cavities Data, Historical Land Use Information (1:2,500), Historical Land Use Information (1:10,000) and Ground Stability Data (1:50,000).	
Mining and Natural Cavities Data	1
The Mining and Natural Cavities Data section features data sets related to the existence of mining areas and their potential hazards; and details of naturally formed cavities. Data sets within this section are not plotted, with the exception of BGS Recorded Mineral Sites and Potential Mining Areas which feature on the Historical Land Use Information (1:10,000) map.	
Historical Land Use Information (1:2,500)	2
The Historical Land Use Information (1:2,500) section contains data captured from analysis carried out by Landmark of 1:1,250 and 1:2,500 scale historical Ordnance Survey mapping, identifying areas where, historically, the land uses were potentially contaminative. For the purpose of this Envirocheck module, only historical data relating to mining and ground stability has been included and plotted on the corresponding Historical Land Use Information (1:2,500) map. This section also includes the Subterranean Features data set, which details various man-made and man-used underground spaces obtained from the Subterranea Britannica society.	
Historical Land Use Information (1:10,000)	4
The Historical Land Use (1:10,000) section covers data captured from the systematic analysis carried out by Landmark of 1:10, 560 and 1:10,000 scale historical Ordnance Survey mapping dating back to the mid-19th century, identifying potentially contaminative past industrial land uses. For the purpose of this Envirocheck module, only data relating to mining and ground stability has been included and plotted on the accompanying Historical Land Use Information (1:10,000) map.	
Ground Stability Data (1:50,000)	5
The Ground Stability (1:50,000) section includes the BGS Geosure data suite, reporting features to 250m and plotted onto 3 separate maps. Also reported is brine subsidence, brine mining and salt mining data sets, of which Brine Pumping and Salt Mining Related Features are plotted, and subsidence insurance claims and insurance investigations data, which is not plotted.	
Historical Map List	6
The Historical Map List section details the historical mapping that has been analysed for your site, in relation to the Historical Land Use Information sections.	
Data Currency	7
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The brine subsidence data relating to the Driotwich area as provided in this report is derived from JPB studies and physical monitoring undertaken annually over more than 35 years. For more detailed interpretation contact enquiries@jpb.co.uk. JPB retain the copyright and intellectual rights to this data and accept no liability for any loss or damage, including in direct or consequential loss, arising from the use of this data.

The Mining Instability data was obtained on licence from Ove Arup & Partners Limited (for further information, contact mining.review@arup.com). No reproduction or further use of such Data is to be made without the prior written consent of Ove Arup & Partners Limited. The supplied Mining Instability data is derived from publicly available records and other third party sources and neither Ove Arup & Partners nor Landmark warrant the accuracy or completeness of such information or data.

Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m
Mining and Natural Cavities Data					
BGS Recorded Mineral Sites	pg 1		1	1	
Coal Mining Affected Areas			n/a	n/a	n/a
Man Made Mining Cavities					
Mining Instability			n/a	n/a	n/a
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential Mining Areas					
Historical Land Use Information (1:2,500)					
Extractive Industries or Potential Excavations from 1855-1909 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1893-1915 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1906-1937 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1924-1949 (100m)				n/a	n/a
Extractive Industries or Potential Excavations from 1950-1980 (100m)	pg 2	3	14	n/a	n/a
Subterranean Features (100m)				n/a	n/a
Historical Land Use Information (1:10,000)					
Air Shafts					
Disturbed Ground					
General Quarrying	pg 4				1
Heap, unknown constituents					
Mineral Railway	pg 4				2
Mining & quarrying general					
Mining of coal & lignite					
Quarrying of sand & clay, operation of sand & gravel pits					
Former Marshes					
Potentially Infilled Land (Non-Water)	pg 4				1
Potentially Infilled Land (Water)	pg 4	1	1	2	7
Ground Stability Data (1:50,000)					
CBSCB Compensation District			n/a	n/a	n/a
Brine Pumping Related Features					
Brine Subsidence Solution Area					
Potential for Collapsible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 5	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 5	Yes		n/a	n/a
Salt Mining Related Features					

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Summary

Report Version v53.0

Mining and Natural Cavities Data

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**BGS Recorded Mineral Sites** Site Name: Llanwern Steelworks Slag Location: Llanwern, Newport, Gwent Source: British Geological Survey, National Geoscience Information Service Reference: 13203 Type: Tip **Status: Ceased** Operator: Tarmac (A Crh Company) Operator Location: Not Supplied Periodic Type: Not Available Geology: Blast Furnace Slag Commodity: Blast Furnace Slag Positional Accuracy: Located by supplier to within 100m	A8NW (S)	237	1	336500 186100
2	**BGS Recorded Mineral Sites** Site Name: Llanwern Works Location: Llanwern, Newport, Gwent Source: British Geological Survey, National Geoscience Information Service Reference: 13204 Type: Tip **Status: Ceased** Operator: Hanson Cement Operator Location: Not Supplied Periodic Type: Not Available Geology: Ground Granulated Blast Furnace Slag - Addition, Cementitious Commodity: Blast Furnace Slag Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	362	1	337000 186100
	Coal Mining Affected Areas In an area which may not be affected by coal mining				
	Non Coal Mining Areas of Great Britain No Hazard				

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: 1967	A13NE (N)	0	-	336542 186739
4	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: 1967	A13SE (S)	0	-	336538 186411
5	**Extractive Industries or Potential Excavations from 1950-1980** Use: Lime Plant First Map Published Date: 1967 Last Map Published Date: 1967	A13SW (S)	0	-	336521 186417
6	**Extractive Industries or Potential Excavations from 1950-1980** Use: Bunkers First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (N)	4	-	336593 186755
7	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (N)	17	-	336545 186777
8	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (N)	22	-	336532 186779
9	**Extractive Industries or Potential Excavations from 1950-1980** Use: Ponds First Map Published Date: 1967 Last Map Published Date: 1967	A13SE (E)	24	-	336762 186513
10	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (NE)	40	-	336726 186656
11	**Extractive Industries or Potential Excavations from 1950-1980** Use: Slag Heaps First Map Published Date: 1967 Last Map Published Date: N/A	A13SE (S)	71	-	336541 186260
12	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (NE)	77	-	336763 186687
13	**Extractive Industries or Potential Excavations from 1950-1980** Use: Slag Heap First Map Published Date: 1967 Last Map Published Date: N/A	A13SW (S)	79	-	336437 186260

Historical Land Use Information (1:2,500)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Extractive Industries or Potential Excavations from 1950-1980** Use: Ponds First Map Published Date: 1967 Last Map Published Date: N/A	A13SE (SE)	83	-	336746 186244
15	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1967 Last Map Published Date: N/A	A13SE (SE)	83	-	336804 186403
16	**Extractive Industries or Potential Excavations from 1950-1980** Use: Ponds First Map Published Date: 1967 Last Map Published Date: N/A	A13SE (SE)	85	-	336761 186250
17	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pond First Map Published Date: 1967 Last Map Published Date: N/A	A13NE (NE)	87	-	336674 186798
18	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: N/A	A13NW (N)	92	-	336443 186842
19	**Extractive Industries or Potential Excavations from 1950-1980** Use: Pipe Line First Map Published Date: 1967 Last Map Published Date: N/A	A13NW (N)	95	-	336419 186847

Historical Land Use Information (1:10,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**General Quarrying** Use: Not Supplied Date of Mapping: 1887 - 1922	A23SE (N)	800	-	336557 187563
21	**Mineral Railway** Use: Not Supplied Date of Mapping: 1922	A18NW (N)	665	-	336410 187421
22	**Mineral Railway** Use: Not Supplied Date of Mapping: 1922	A18NW (N)	696	-	336235 187437
23	**Potentially Infilled Land (Non-Water)** Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1989	A23SE (N)	800	-	336557 187563
24	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A13NE (E)	0	-	336709 186545
25	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NW (E)	208	-	336945 186592
26	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1989	A17SE (NW)	373	-	336081 186975
27	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1989	A17SE (NW)	376	-	336078 186975
28	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A9SW (SE)	647	-	336911 185704
29	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A14NE (E)	657	-	337397 186610
30	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	857	-	335453 186569
31	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	887	-	335423 186580
32	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	919	-	335390 186570
33	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	920	-	335419 186779
34	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1965	A11NE (W)	980	-	335331 186597

Ground Stability Data (1:50,000)

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	CBSCB Compensation District The site does not fall within the brine compensation area.				
	Brine Subsidence Solution Area The site does not fall within the brine subsidence solution area.				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
35	**Potential for Compressible Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
36	**Potential for Landslide Ground Stability Hazards** Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
37	**Potential for Running Sand Ground Stability Hazards** Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528
38	**Potential for Shrinking or Swelling Clay Ground Stability Hazards** Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SW)	0	1	336526 186528

Historical Map List

The following mapping has been analysed for Historical Land Use Information (1:2,500):

The following mapping has been analysed for Historical Land Use Information (1:10,000):

1:10,560	Mapsheet	Published Date
Monmouthshire	029_00	1886
Monmouthshire	034_00	1887
Monmouthshire	029_SE	1902
Monmouthshire	029_SW	1902
Monmouthshire	034_NE	1902
Monmouthshire	034_NW	1902
Monmouthshire	029_SE	1922
Monmouthshire	029_SW	1922
Monmouthshire	034_NE	1922
Monmouthshire	034_NW	1922
Monmouthshire	034_NW	1938
Monmouthshire	029_SE	1954
Monmouthshire	029_SW	1954
Monmouthshire	034_NE	1954
Ordnance Survey Plan	ST38NE	1965
1:10,000	**Mapsheet**	**Published Date**
Ordnance Survey Plan	ST38NE	1989

Data Currency

Mining and Cavities Data	Version	Update Cycle
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	May 2021	Bi-Annually
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Man Made Mining Cavities Stantec UK Ltd	May 2021	Bi-Annually
Mining Instability Ove Arup & Partners	June 1998	Not Applicable
Natural Cavities Stantec UK Ltd	May 2021	Bi-Annually
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Historical Land Use Information (1:2,500)	**Version**	**Update Cycle**
Subterranean Features Landmark Information Group Limited	February 2020	Bi-Annually
Ground Stability Data (1:50,000)	**Version**	**Update Cycle**
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	As notified
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Brine Subsidence Solution Area Johnson Poole & Bloomer	December 2020	Annual Rolling Update

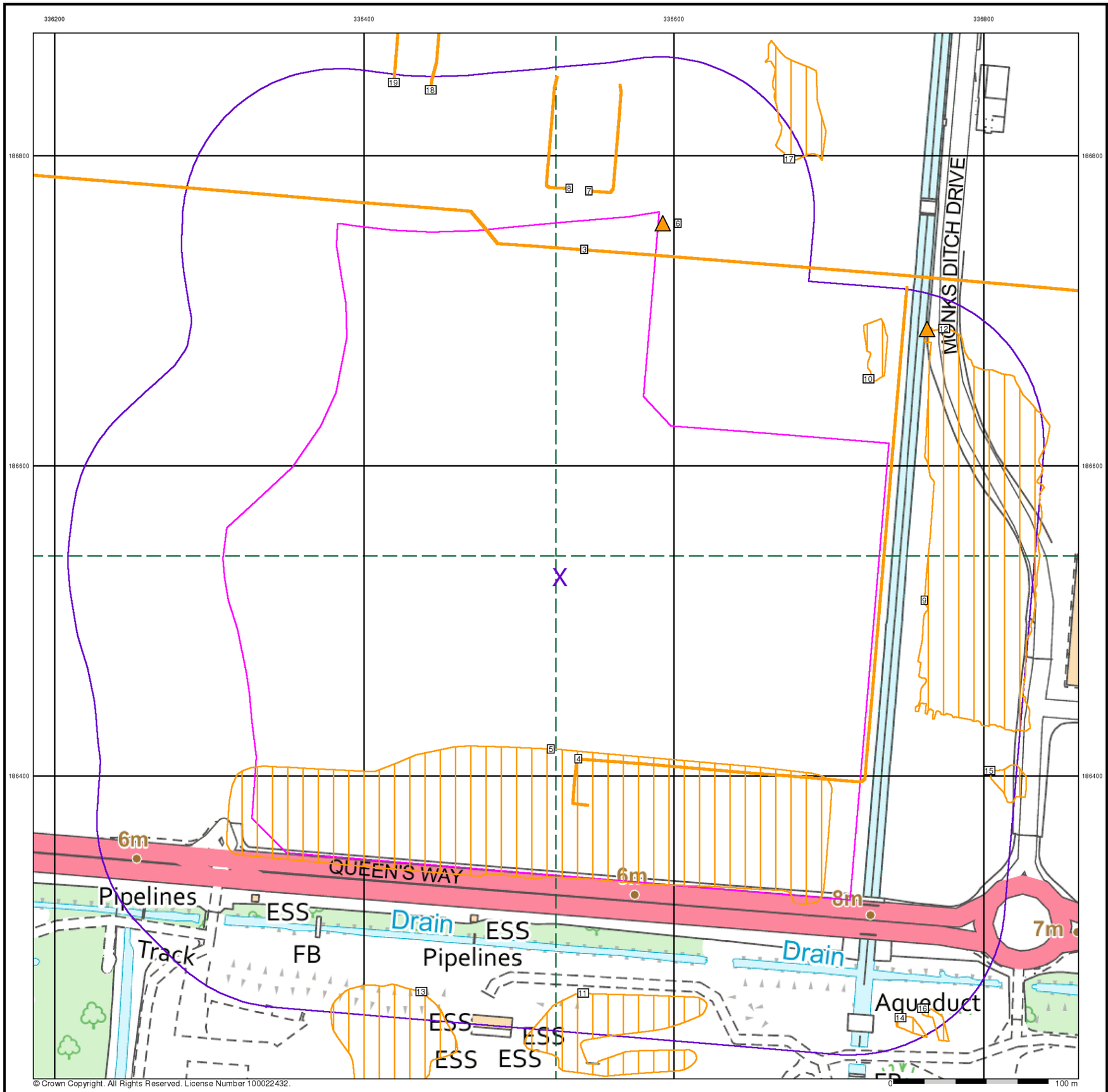
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	Map data
British Geological Survey	British Geological Survey NATURAL ENVIRONMENT RESEARCH COUNCIL
The Coal Authority	The Coal Authority
Ove Arup	ARUP
Stantec UK Ltd	Stantec
Wardell Armstrong	wardell armstrong your earth our world
Johnson Poole & Bloomer	JPB

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk



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Historical Land Use Information (1:2,500)

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Map ID

Several of Type at Location

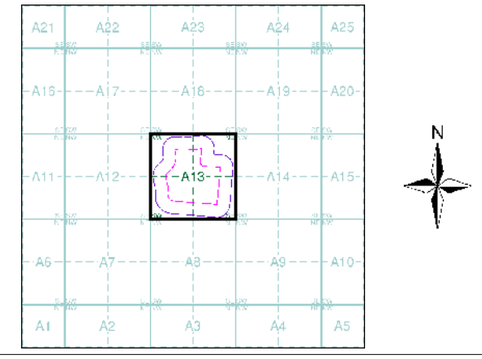
Potentially Contaminative Industrial Uses (Extractive Industries Activity)

	Point	Line	Polygon
Extractive Industries Activity from 1855 - 1909	▲	—	▭
Extractive Industries Activity from 1893 - 1915	▲	—	▨
Extractive Industries Activity from 1906 - 1937	▲	—	▤
Extractive Industries Activity from 1924 - 1949	▲	—	▨
Extractive Industries Activity from 1950 - 1980	▲	—	▥

Subterranean Features

	Point	Line	Polygon
Subterranean Features	▼	- - -	▭

Mining and Ground Stability - Segment A13



Order Details

Order Number:	287158115_1_1
Customer Ref:	P18-669 5e1/5e2
National Grid Reference:	336530, 186530
Slice:	A
Site Area (Ha):	14.1
Plot Buffer (m):	100

Site Details

Site at 336524,186542

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk

Appendix E
UXO Risk Map

UNEXPLODED BOMB RISK MAP

SITE LOCATION

Map Centre: 336514,186462



This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

Miltary | **Industry** | **UXO find** | **Other**

Transport | **Docks** | **Luftwaffe targets**

Utilities | **Bombing decoy** | **Airfields**

How to use your Unexploded Bomb (UXB) risk map?

This map indicates the potential for UXBs to be present because of World War Two (WWII) bombing. It can be incorporated into a technical report, such as a Phase 1 Desk Study, or similar document as an indication of the potential for UXO encounter on a Site. Other sources of UXO may also be indicated, although note that these are not comprehensive and more detailed research is required to confirm their presence.

What if my Site is in a moderate or high density area?

We typically recommend that a detailed UXO desk study and risk assessment is undertaken for sites in an area with a moderate or high bombing density.
Additionally, if your site is in close proximity to a strategic target, military establishment, airfield or bombing decoy, then additional detailed research is recommended.

If my site is in a low risk area, do I need to do anything?

If both the map and other research confirm that there is a low potential for UXO to be present on your site, then, subject to your own comfort and risk tolerance, works can proceed with no special precautions.

If you are unsure whether other sources of UXO may be present, you can request one of our pre-desk study assessments (PDSA) by emailing a site boundary and location to pdsa@zetica.com.

You should never plan site work or undertake a risk assessment using these maps alone. More detail is required, to include an assessment of the likelihood of a source of UXO hazard from other military activity not reflected on these maps.

If I have any questions, who do I contact?

tel: +44 (0) 1993 886682 **email:** uxo@zetica.com **web:** www.zeticauxo.com

The information in this UXB risk map is derived from a range of sources and should be used with the accompanying notes on our website.

Zetica cannot guarantee the accuracy or completeness of the information or data used and cannot accept any liability for any use of the maps. These maps can be used as part of a technical report or similar publication, subject to acknowledgement. The copyright remains with Zetica Ltd.

Appendix F
Exploratory Hole Logs

IAN FARMER ASSOCIATES
Geotechnical & Environmental Specialists

Contract Name:		Client:			Borehole ID:
Llanwern Site Wide CWRA & Phase 2D		St Modwen Developments Limited			CWWS17
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
21561	05/04/2016	CL			
Dynamic Sample Borehole Log	Easting:	Northing:	Ground Level:	Plant Used:	Print Date: / Scale:
			2.00mOD		02/06/2016 / 1:40
Weather:		Termination:			

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				(1.50)		MADE GROUND: Dark brown, sandy, gravelly clay. Gravel is fine to coarse, angular to subrounded red brick, concrete, clinker		
				1.50		Firm, bluish grey, silty CLAY (Tidal Flat Deposits)		
				(0.50)				
				2.00		End of Borehole at 2.00m		

1 2 3 4 5 6 7 8

Borehole Diameter

Depth (m)	Dia (m)

Installation

Depth Top	Base (m)	Diameter	Pipe Type
0.00	0.50		PLAIN
0.50	1.50		SLOTTED

Water Strikes

Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose to (m)	Remarks

Remarks:

IAN FARMER ASSOCIATES
Geotechnical & Environmental Specialists

Contract Name:		Client:			Borehole ID:
Llanwern Site Wide CWRA & Phase 2D		St Modwen Developments Limited			CWWS18
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 1
21561	05/04/2016	HB			
Dynamic Sample Borehole Log	Easting:	Northing:	Ground Level:	Plant Used:	Print Date: / Scale:
			1.30mOD		02/06/2016 / 1:40
Weather:		Termination:			

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
				(1.30)		MADE GROUND: Moss over soft to firm, dark brown, gravelly clay. Gravel is medium to coarse, angular to subangular concrete, red brick, clinker, coal, limestone and fragments of plastic and rootlets *At 0.80m: Rare rootlets*		
				1.30		End of Borehole at 1.30m		

Borehole Diameter		Installation			
Depth (m)	Dia (m)	Depth Top	Base (m)	Diameter	Pipe Type

Water Strikes					
Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose to (m)	Remarks

Remarks:
Refusal at 1.30m

IAN FARMER ASSOCIATES
Geotechnical & Environmental Specialists

Contract Name:		Client:			Borehole ID:
Llanwern Site Wide CWRA & Phase 2D		St Modwen Developments Limited			CWCP18
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 1 of 2
21561	19/04/2016	HP		DRAFT	
Cable Percussion Borehole Log	Easting:	Northing:	Ground Level: 12.35mOD	Plant Used:	Print Date: 02/06/2016 — Scale: 1:50

Weather: | Termination: | SPT Hammer: N/R, Energy Ratio: N/R

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
0.50	D1			(2.00)		MADE GROUND: Dark brown, sandy gravel. Gravel is fine to medium, angular to subangular slag and brick		
1.20 - 1.65	D2	SPT(C) 1.20m, N=37 (7,8/9,10,9,9)						
2.00 - 2.45	D3	SPT(C) 2.00m, N=8 (1,2/2,2,2,2)		2.00				
				(0.40)		MADE GROUND: Soft, dark grey, slightly sandy, slightly gravelly, silty clay. Gravel is fine to coarse, angular to subangular slag		
2.50	D4			2.40		Soft, brownish grey, silty CLAY (Tidal Flat Deposits)		
3.00 - 3.45	TW1	15 blows 100% recovery		(1.50)				
3.50	D5			3.90				
4.00 - 4.45	B1	SPT(S) 4.00m, N=5				Very soft, dark grey, fibrous PEAT (Tidal Flat Deposits)		
4.00 - 4.45	D6	(1,1/1,1,1,2)						
5.00 - 5.45	D7	SPT(S) 5.00m, N=2 (1,0/1,0,1,0)		(2.10)				
6.00 - 6.45	D8	SPT(S) 6.00m, N=1 (1,0/0,1,0,0)		6.00		Very soft, grey, clayey SILT (Tidal Flat Deposits)		
7.50 - 7.95	D9	SPT(S) 7.50m, N=4 (1,1/1,1,1,1)		(4.60)				
9.00 - 9.45	D10	SPT(S) 9.00m, N=2 (1,0/1,0,1,0)						
						Continued next sheet		

Start & End of Shift Observations

Date	Time	Depth (m)	Casing (m)	Water (m)

Borehole Diameter

Depth (m)	Dia (mm)
12.35	150

Casing Diameter

Depth (m)	Dia (mm)
12.00	150

Chiselling

From (m)	To (m)	Duration	Remarks
11.80	12.00	00:30	

Installation

Top (m)	Base (m)	Type	Dia (mm)
0.00	10.50	PLAIN	50
10.50	12.00	SLOTTED	50

Remarks:

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
6.00	6.00	7.20	20	5.00	
12.10	12.00		20	11.00	

IAN FARMER ASSOCIATES
Geotechnical & Environmental Specialists

Contract Name:		Client:			Borehole ID:
Llanwern Site Wide CWRA & Phase 2D		St Modwen Developments Limited			CWCP18
Contract Number:	Date Started:	Logged By:	Checked By:	Status:	Sheet 2 of 2
21561	19/04/2016	HP		DRAFT	
Cable Percussion Borehole Log	Easting:	Northing:	Ground Level: 12.35mOD	Plant Used:	Print Date: 02/06/2016	Scale: 1:50

Weather: | Termination: | SPT Hammer: N/R, Energy Ratio: N/R

Samples & In Situ Testing			Strata Details				Groundwater	
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation
10.50 - 10.95	B2	SPT(S) 10.50m, N=37 (7,8/8,9,10,10)		10.60		Very stiff, reddish brown, silty CLAY (Mercia Mudstone Group Grade IVb)		
				(1.75)				
12.00 - 12.35	D11	SPT(S) 12.00m, 50 (25 for 145mm/50 for 235mm)		12.35		End of Borehole at 12.35m		

11 12 13 14 15 16 17 18 19 20

Start & End of Shift Observations

Date	Time	Depth (m)	Casing (m)	Water (m)

Borehole Diameter

Depth (m)	Dia (mm)
12.35	150

Casing Diameter

Depth (m)	Dia (mm)
12.00	150

Remarks:

Chiselling

From (m)	To (m)	Duration	Remarks
11.80	12.00	00:30	

Installation

Top (m)	Base (m)	Type	Dia (mm)
0.00	10.50	PLAIN	50
10.50	12.00	SLOTTED	50

Water Strikes

Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
6.00	6.00	7.20	20	5.00	
12.10	12.00		20	11.00	

Trial Pit No.MSY011

Sheet 1 of 1

Start Date:	15/01/2014	**Ground Level:**	-
End Date:	15/01/2014	**Easting:**	36654
Logged By:	AEM	**Northing:**	86492

Site: Misc Stockyard Logs
Client: St Modwen Developments
Project No: LLAMSY

Excavation Method:
Plant: Komatsu 210
Shoring / Support: None

Samples & In-Situ Tests			Strata Details			
Depth (m)	Type	HSV (kPa)	Water	Legend	Depth	Description
					0.30	MADE GROUND. Brown sandy gravelly CLAY. Coarse gravel of slag
					0.70	MADE GROUND. Black / grey gravelly SAND. Coarse gravel of mudstone, quartz and concrete
					(0.60)	
					1.30	MADE GROUND. Orange brown gravelly clayey SAND. Coarse gravel of shale and mudstone
					1.60	MADE GROUND. Black / brown clayey gravelly SAND. Coarse gravel of mudstone. Occasional rebar
					(0.60)	
					2.20	MADE GROUND. Brown sandy gravelly CLAY. Coarse gravel of shale and quartz
					2.50	Blue CLAY End of Trial Pit at 2.50 m

Groundwater Observations:
Water ingress at 1.3m.

Stability:
Pit stable

Pit Dimensions:

Pit Depth (mbgl)
2.50

Pit Length (m)
-

Pit Width (m)
-

General Remarks:
Pit terminated in natural soils.

Logger:	AEM
Date of Logging:	-
Checker:	
Date of Checking:	-

Trial Pit No.MSY012

Sheet 1 of 1

Start Date:	15/01/2014	**Ground Level:**	-
End Date:	15/01/2014	**Easting:**	36698
Logged By:	AEM	**Northing:**	86403

Site: Misc Stockyard Logs
Client: St Modwen Developments
Project No: LLAMSY

Excavation Method:
Plant: Komatsu 210
Shoring / Support: None

Samples & In-Situ Tests			Strata Details			
Depth (m)	Type	HSV (kPa)	Water	Legend	Depth	Description
					0.10	MADE GROUND. Brown clayey sandy GRAVEL. Coarse gravel of concrete, shale, mudstone and slag
					0.20	
					0.30	
					0.40	MADE GROUND. Grey / red GRAVEL of slag
					(0.70)	
					1.10	MADE GROUND. Grey Coarse gravelly SAND. Fine Gravel of slag
					1.30	MADE GROUND. Red brown sandy GRAVEL of shale
						MADE GROUND. Loose red GRAVEL of brick, mudstone, shale, slag and sandstone
						Blue CLAY
						End of Trial Pit at 1.30 m

Groundwater Observations:
Rapid water ingress at 0.6m.

Stability:
Pit stable

Pit Dimensions:

Pit Depth (mbgl)	Pit Width (m)	Pit Length (m)
1.30	-	-

General Remarks:
Pit terminated in natural soils.

Logger:	AEM
Date of Logging:	-
Checker:	
Date of Checking:	-

Trial Pit No.MSY013

Sheet 1 of 1

Start Date:	15/01/2014	**Ground Level:**	-
End Date:	15/01/2014	**Easting:**	36612
Logged By:	AEM	**Northing:**	86393

Site: Misc Stockyard Logs
Client: St Modwen Developments
Project No: LLAMSY

Excavation Method:
Plant: Komatsu 210
Shoring / Support: None

Samples & In-Situ Tests			Strata Details			
Depth (m)	Type	HSV (kPa)	Water	Legend	Depth	Description
					0.10	MADE GROUND. Brown sandy GRAVEL of mudstone, concrete and slag
					0.20	
					0.50	MADE GROUND. Crimson red sandy GRAVEL of slag
					0.60	
					0.80	MADE GROUND. Brown clayey gravelly SAND. Coarse gravel of mudstone and slag
					1.00	
					1.20	MADE GROUND. White Clay (Lime)
					(0.90)	
					2.10	MADE GROUND. Brown clayey gravelly SAND. Coarse gravel of mudstone and slag
					2.20	
						MADE GROUND. White Clay (Lime)
						MADE GROUND. Grey sandy GRAVEL of cement, chalk, limestone and flint
						MADE GROUND. Brown / yellow / red GRAVEL of mudstone, shale, brick and occasional slag
						Blue CLAY
						End of Trial Pit at 2.20 m

Groundwater Observations:
Water ingress at 0.5m.

Stability:
Pit stable

Pit Dimensions:

Pit Depth (mbgl)	Pit Width (m)	Pit Length (m)
2.20	-	-

General Remarks:
Pit terminated in natural soils.

Logger:	AEM
Date of Logging:	-
Checker:	
Date of Checking:	-

Trial Pit No.MSY014

Sheet 1 of 1

Start Date:	15/01/2014	**Ground Level:**	-
End Date:	15/01/2014	**Easting:**	36527
Logged By:	AEM	**Northing:**	86404

Site: Misc Stockyard Logs
Client: St Modwen Developments
Project No: LLAMSY

Excavation Method:
Plant: Komatsu 210
Shoring / Support: None

Samples & In-Situ Tests			Strata Details			
Depth (m)	Type	HSV (kPa)	Water	Legend	Depth	Description
					(1.20)	MADE GROUND. Grey sandy gravelly CLAY. Coarse gravel of sinter, mudstone and occasional slag, brick and concrete
					1.20	
						MADE GROUND. Red brown sandy GRAVEL of shale
					1.70	
						Blue CLAY
					1.90	End of Trial Pit at 1.90 m

Groundwater Observations:
Water ingress at 1.5m.

Stability:
Pit stable

Pit Dimensions:

Pit Depth (mbgl): 1.90
Pit Length (m): -
Pit Width (m): -

General Remarks:
Pit terminated in natural soils.

Logger:	AEM
Date of Logging:	-
Checker:	
Date of Checking:	-

Trial Pit No.MSY015

Sheet 1 of 1

Start Date:	15/01/2014	**Ground Level:**	-
End Date:	15/01/2014	**Easting:**	36428
Logged By:	AEM	**Northing:**	86389

Site: Misc Stockyard Logs
Client: St Modwen Developments
Project No: LLAMSY

Excavation Method:
Plant: Komatsu 210
Shoring / Support: None

Samples & In-Situ Tests | Strata Details

Depth (m)	Type	HSV (kPa)	Water	Legend	Depth	Description
					0.20	MADE GROUND. Brown gravelly SAND. Coarse gravel of mudstone, concrete and shale
					0.30	
					0.40	MADE GROUND. Crimson red sandy GRAVEL of slag
					(0.60)	
					1.00	MADE GROUND. White Clay (Lime)
					1.20	MADE GROUND. White grey sandy clayey GRAVEL. Coarse gravel of flint, chalk and limestone
					1.60	MADE GROUND. Red brown sandy GRAVEL of shale
					1.80	MADE GROUND. Black sandy gravelly CLAY. Gravel of quartz (former topsoil)
						Blue CLAY
						End of Trial Pit at 1.80 m

Groundwater Observations:
Water ingress at 1.2m.

Stability:
Pit stable

Pit Dimensions:

Pit Depth (mbgl)
1.80

Pit Width (m)
-

Pit Length (m)
-

General Remarks:
Pit terminated in natural soils.

Logger:	AEM
Date of Logging:	-
Checker:	
Date of Checking:	-

Trial Pit Log

TrialPit No: **AL33**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336411E - 186483N Level: 6.20	Date 29/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.90	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.90	0.30	MADE GROUND: Black sandy clayey GRAVEL. Gravel is fine to medium angular comprising of slag, shale and mudstone.		
				5.50	0.70	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subrounded to rounded of slag, sandstone, shale and mudstone.		
0.80	AL33 -1	ES		5.30	0.90	MADE GROUND: Dark brown clayey GRAVEL. Gravel is fine to coarse subrounded to rounded of mudstone and occasional various slags.		
						Refusal due to hard ground and low recovery.		
						End of Pit at 0.900m		

1 2 3 4 5

Remarks:

Stability:

AGS

Trial Pit Log

TrialPit No **AL36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336393E - 186389N Level: 6.42	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Grey sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising slag with occassional mudstone and shale.		
				5.52	1	0.90	MADE GROUND: Black sandy clayey GRAVEL. Gravel is fine to medium angular comprising of slag, shale and mudstone.		
				4.42	2	2.00	TIDAL FLAT DEPOSITS - Soft grey CLAY.		
				4.32		2.10	End of Pit at 2.100m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AM32**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336430E - 186474N Level: 6.52	Date 29/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.02	0.50	MADE GROUND: Black sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag.		
						MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of fused slag with occasional cobbles of slag and metal fragments.		
				5.02	1.50	*Refusal due to hard ground (fused slag) and low recovery.* End of Pit at 1.500m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No: **AM34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336431E - 186427N Level: 6.43	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.60	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.23	0.20	MADE GROUND: Brown slightly sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag.		
						MADE GROUND: Black sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag.		
						Refusal due to hard ground (fused slag) and low recovery.		
				5.83	0.60	End of Pit at 0.600m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AM35**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336429E - 186404N Level: 6.34	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag.		
				5.64		0.70	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded of slag with occassional rebar and rare mudstone.		
					1				
				4.64		1.70	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.54		1.80	End of Pit at 1.800m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AM36**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336427E - 186376N Level: 6.40	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag.		
				5.60		0.80			
					1		MADE GROUND: Bluish grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag.		
				5.20		1.20			
							MADE GROUND: Grey slighlty cobbly GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag.		
					2				
				4.30		2.10	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.20		2.20	End of Pit at 2.200m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AM37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336428E - 186363N Level: 6.48	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown silty GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, abundant rootlets and occassional wood.		
				5.68		0.80			
					1		MADE GROUND: Dark brown clayey GRAVEL. Gravel is fine to coarse subangular to subrounded slag with occasional cobbles of slag and metal fragments.		
				4.98		1.50			
							MADE GROUND: Black slightly sandy cobbly GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, ash and coal dust.		
				4.58		1.90			
				4.48	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
							End of Pit at 2.100m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No
AN32
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336455E - 186472N Level: 6.40	Date 29/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.90		0.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
				5.40	1	1.00	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag. *Refusal due to hard ground (fused slag) and low recovery.* End of Pit at 1.000m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AN33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336453E - 186447N Level: 6.40	Date 29/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.40	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.70	0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional rootlets.		
				5.10	1.30	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.05	1.35	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
						End of Pit at 1.400m		

1
2
3
4
5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AN34**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336454E - 186419N Level: 6.37	Date 20/09/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.97		0.40	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
							MADE GROUND: Grey sandy GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
				5.37	1	1.00	*Refusal due to hard ground (fused slag) and low recovery.* End of Pit at 1.000m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AN35
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336449E - 186398N Level: 6.73	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.03		0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.73	1	1.00	MADE GROUND: Grey very sandy GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
							End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AN36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336447E - 186373N Level: 6.40	Date 01/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.70		0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
					1		MADE GROUND: Grey very sandy GRAVEL. Gravel is fine to medium angular to subangular of slag with occassional mudstone.		
				5.30		1.10	MADE GROUND: Brown very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
							End of Pit at 1.100m		
				4.40	2	2.00			
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AN37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336446E - 186359N Level: 6.38	Date 01/12/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown sandy very gravelly CLAY. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
				5.48	1	0.90	MADE GROUND: Grey clayey GRAVEL. Gravel is medium to coarse angular to subangular of slag, mudstone, sandstone and occassional wood fragments.		
				4.78		1.60	MADE GROUND: Bluish grey clayey GRAVEL. Gravel is fine to medium angular to subrounded of slag.		
				4.58		1.80	MADE GROUND: Brown clayey GRAVEL. Gravel is fine to coarse angular to subangular of slag.		
				4.38	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.28		2.10	End of Pit at 2.100m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AO32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336480E - 186470N Level: 6.38	Date 13/07/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.90	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.88	0.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, mudstone occasional bricks and timber.		
				4.88	1.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of fused slag with occasional cobbles of slag and metal fragments.		
				3.88	2.50	MADE GROUND: Grey sandy GRAVEL. Gravel is medium to coarse angular to subangular of slag, mudstone, sandstone and occassional wood fragments.		
				3.48	2.90	MADE GROUND: Greyish brown clayey GRAVEL. Gravel is fine to medium angular comprising of slag, shale and mudstone.		
				3.38	3.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY. End of Pit at 2.900m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AO33**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336478E - 186445N Level: 6.37	Date 13/07/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.70	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.67	0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional rootlets and rare wood.		
				5.07	1.30	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag.		
				4.67	1.70	MADE GROUND: Dark grey sandy GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
						End of Pit at 1.700m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AO34
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336470E - 186417N Level: 6.37	Date 24/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.77		0.60	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium subangular to subrounded comprising slag, occassional mudstone and sandstone.		
					1		MADE GROUND: Grey cobbly GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
				4.87		1.50	End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AO36
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336472E - 186371N Level: 6.26	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.76		0.50	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional rootlets and rare wood.		
							End of Pit at 0.500m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No: **AO37**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336470E - 186346N Level: 6.53	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.25	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.78	1	0.75	MADE GROUND: Grey sandy gravelly CLAY. Gravel is fine to medium subangular to subrounded comprising slag, occassional mudstone and sandstone.		
					2				
					3		End of Pit at 2.250m		
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AP34**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336501E - 186418N Level: 6.40	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.90	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.00		0.40	MADE GROUND: Brown silty sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.40	1	1.00	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to medium angular to subangular of slag mudstone and occassional pig iron fragments.		
				4.50	2	1.90	MADE GROUND: Brown cobbly GRAVEL. Gravel is fine to medium angular to subangular of fused slag.		
							End of Pit at 1.900m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AP35**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336499E - 186394N Level: 7.44	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.94	0.50	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				6.24	1.20	MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
				6.14	1.30	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag and ash.		
						End of Pit at 1.300m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AP36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336497E - 186369N Level: 6.35	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.95	0.40	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.15	1.20	MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
				4.85	1.50	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag and ash.		
						End of Pit at 1.500m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AP37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336495E - 186344N Level: 6.57	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.17		0.40	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
					1		MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
				5.37		1.20	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
				4.87		1.70	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.77		1.80	End of Pit at 1.800m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AQ32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336531E - 186467N Level: 6.70	Date 16/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.50	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.20	0.50	MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
						End of Pit at 0.500m		

1 2 3 4 5

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AQ33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336528E - 186441N Level: 6.39	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.70	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.59	0.80	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.29	1.10	MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
				4.69	1.70	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
						End of Pit at 1.700m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AQ34**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336526E - 186416N Level: 6.42	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.92		0.50	MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
					1		MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.92		1.50	End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AQ35**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336524E - 186391N Level: 6.60	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.10		0.50	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone.		
					1		MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of fused slag.		
				5.40		1.20	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.60	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.40		2.20	End of Pit at 2.200m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AQ36**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336522E - 186367N Level: 6.03	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.53		0.50	MADE GROUND: Grey sandy GRAVEL.Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone with rare bitumen pipe and rebar.		
					1		MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.03	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				3.93		2.10	End of Pit at 2.100m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AQ37**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336520E - 186342N Level: 6.03	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.80	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.23	1	0.80	MADE GROUND: Grey sandy GRAVEL.Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone with rare bitumen pipe and rebar.		
							End of Pit at 0.800m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No: **AR32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336560E - 186466N Level: 9.09	Date 04/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.60	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				8.59	0.50	MADE GROUND: Black sandy GRAVEL.Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone and shale.		
				8.49	0.60	MADE GROUND: Black sandy cobbly GRAVEL.Gravel is coarse angular to subangular of fused slag.		
						End of Pit at 0.600m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AR33
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336553E - 186439N Level: 6.37	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.60	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.47	1	0.90	MADE GROUND: Brown and white sandy GRAVEL.Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone, possible lime and rebar.		
				4.87		1.50	MADE GROUND: Black sandy GRAVEL.Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone and shale.		
				4.77	2	1.60	MADE GROUND: Greyish white sandy GRAVEL.Gravel is coarse angular to subangular of fused slag.		
					3		End of Pit at 1.600m		
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AR34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336551E - 186414N Level: 6.40	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.90		0.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare bitumen pipe.		
					1		MADE GROUND: Black sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				4.65		1.75	MADE GROUND: Brown cobbly GRAVEL. Gravel is medium to coarse subangular to subrounded of slag, sandstone, shale and mudstone with occasional cobbles of slag and occasional metal. fragments.		
				4.40	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.20		2.20	End of Pit at 2.200m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AR35**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336549E - 186389N Level: 6.31	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.15	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.71		0.60	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare bitumen pipe.		
					1		MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				5.01		1.30	MADE GROUND: Brown cobbly GRAVEL. Gravel is medium to coarse subangular to subrounded of slag, sandstone, shale and mudstone with occasional cobbles of slag and occasional metal fragments.		
				4.31	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.16		2.15	End of Pit at 2.150m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AR36**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336547E - 186365N Level: 6.15	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.05	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
						MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare wood.		
				5.55	0.60	MADE GROUND: Black and white sandy GRAVEL. Gravel is medium to coarse angular to subrounded of slag, sandstone, shale and mudstone and possible lime.		
				4.85	1.30	MADE GROUND: Brown silty clayey GRAVEL. Gravel is medium to coarse subangular to subrounded of slag, and mudstone with occasional cobbles of slag and occasional metal fragments.		
				4.15	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.10	2.05	End of Pit at 2.050m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AR37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336545E - 186340N Level: 5.93	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.48	0.45	MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare wood.		
				4.73	1.20	MADE GROUND: Brown sandy GRAVEL. Gravel is medium to coarse angular to subrounded of slag, sandstone, shale and mudstone.		
				4.23	1.70	MADE GROUND: Brown silty clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, and mudstone with occasional possible lime.		
				4.13	1.80	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
						End of Pit at 1.800m		

Remarks:

Stability: Collapsing sides

Trial Pit Log

TrialPit No **AS32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336580E - 186462N Level: 9.31	Date 04/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				8.81	0.50	MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare wood.		
				8.01	1.30	MADE GROUND: Brown sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
						End of Pit at 1.500m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AS33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336578E - 186437N Level: 6.35	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.60		0.75	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional rootlets		
					1		MADE GROUND: Brown GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, with occassional mudstone, shale and rare concrete.		
				4.85		1.50	MADE GROUND: Black sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
				4.35	2	2.00	End of Pit at 2.000m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AS34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336576E - 186412N Level: 6.31	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.40	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.91		0.40	MADE GROUND: Brown sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
							End of Pit at 0.400m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AS35**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336574E - 186387N Level: 6.98	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.68		0.30	MADE GROUND: Brown cobbly GRAVEL. Gravel is fine to medium angular comprising slag, mudstone, sandstone, shale and occasional concrete.		
				6.08	1	0.90	MADE GROUND: Grey very sandy GRAVEL. Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone.		
				4.98	2	2.00	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag and coal dust.		
							End of Pit at 2.000m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AS36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336572E - 186362N Level: 7.06	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.56		0.50	MADE GROUND: Brown cobbly GRAVEL. Gravel is fine to medium angular comprising slag, mudstone, sandstone, shale and occasional concrete.		
					1		MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone.		
				5.86		1.20	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				5.26		1.80	End of Pit at 1.800m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AS37**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336570E - 186338N Level: 6.65	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.95		0.70	MADE GROUND: Brown cobbly GRAVEL. Gravel is fine to medium angular comprising slag, mudstone, sandstone, shale and occasional concrete.		
					1		MADE GROUND: Grey sandy GRAVEL. Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone.		
				5.45		1.20	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.65	2	2.00	End of Pit at 2.000m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No: **AT32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336602E - 186461N Level: 10.43	Date 04/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				9.63	0.80	MADE GROUND: Light brown and white sandy very gravelly CLAY. Gravel is fine to medium angular comprising of slag and rare shale and mudstone and lime.		
				9.13	1.30	MADE GROUND: Black very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
						End of Pit at 1.300m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AT33**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336603E - 186435N Level: 6.43	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.83	1	0.60	MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare wood.		
				5.23		1.20	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				4.43	2	2.00	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded fused slag.		
					3		End of Pit at 2.200m		
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AT34**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336601E - 186410N Level: 6.59	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.19	0.40	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
				5.49	1.10	MADE GROUND: Dark brown sandy GRAVEL. Gravel is fine to medium subangular of slag, occasional ash and rare concrete fragments.		
				4.59	2.00	MADE GROUND: Brown very sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.39	2.20	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
						End of Pit at 2.200m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AT35** Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336599E - 186385N Level: 6.85	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.40	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.45	0.40	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional rootlets.		
				5.95	0.90	MADE GROUND: Brown GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, with occassional mudstone, shale and rare concrete.		
				5.45	1.40	MADE GROUND: Black sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
						End of Pit at 1.400m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AT36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336597E - 186360N Level: 6.15	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.55		0.60	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional rootlets		
				5.05	1	1.10	MADE GROUND: Brown GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, with occassional mudstone, shale and rare concrete.		
				4.15	2	2.00	MADE GROUND: Black sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone and lime.		
					3		End of Pit at 2.000m		
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AT37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336595E - 186336N Level: 6.72	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.90	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.12		0.60	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional rootlets		
					1		MADE GROUND: Brown GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, with occassional mudstone, shale and rare concrete.		
				5.62		1.10	MADE GROUND: Black sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
				4.72	2	2.00	End of Pit at 1.900m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AU30**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336639E - 186512N Level: 6.58	Date 19/11/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.10	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.08	0.50	MADE GROUND: Black clayey very sandy GRAVEL. Gravel is medium to coarse angular to subrounded of slag, and occassional sandstone, shale and mudstone.		
						MADE GROUND: Black sandy GRAVEL.Gravel is medium to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
				5.48	1.10	End of Pit at 1.100m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AU31
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336635E - 186486N Level: 6.58	Date 19/11/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.40	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.18		0.40	MADE GROUND: Black sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
							End of Pit at 0.400m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No: **AU32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336630E - 186458N Level: 6.60	Date 16/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.30	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.30		0.30	MADE GROUND: Grey very sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
							End of Pit at 0.300m		

1
2
3
4
5

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AU33**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336628E - 186433N Level: 6.60	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.90	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.70	1 2 3 4 5	0.90	MADE GROUND: Brown very sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone. End of Pit at 0.900m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AU34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336626E - 186408N Level: 7.07	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.30	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.57	0.50	MADE GROUND: Brown very sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising slag with occassional shale and mudstone.		
						MADE GROUND: Brown very sandy gravelly CLAY. Gravel is fine to medium subangular of slag, occasional ash and rare concrete fragments.		
				4.77	2.30	End of Pit at 2.300m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No: **AU35**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336624E - 186383N Level: 7.48	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.98		0.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag.		
					1		MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
				5.98		1.50	End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AU36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336622E - 186358N Level: 6.17	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.47		0.70	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare concrete.		
					1		MADE GROUND: Brown sandy clayey GRAVEL. Gravel is medium to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare concrete with pockets of lime.		
				4.87		1.30	End of Pit at 1.300m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AU37**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336620E - 186333N Level: 6.86	Date 31/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.70	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
						MADE GROUND: Black sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare concrete.		
				6.26	0.60			
						MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded of fused slag, and occassional sandstone, shale and mudstone.		
				6.06	0.80			
						MADE GROUND: Brown sandy GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
				5.16	1.70			
						End of Pit at 1.700m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AV30
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336659E - 186510N Level: 6.58	Date 04/08/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.58	1	1.00	MADE GROUND: Brown very sandy GRAVEL.Gravel is fine to coarse angular to subrounded comprising slag.		
							End of Pit at 1.000m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AV31**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336657E - 186481N Level: 6.58	Date 13/07/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.80	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
						MADE GROUND: Black very sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				5.88	0.70			
				5.78	0.80	MADE GROUND: Brown very sandy clayey GRAVEL. Gravel is fine to coarse subangular to angular of slag, sandstone, shale and mudstone.		
						End of Pit at 0.800m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AV32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336655E - 186456N Level: 6.36	Date 13/07/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown very sandy GRAVEL. Gravel is fine to coarse subangular to subrounded comprising slag with occassional rootlets.		
				5.56		0.80			
							MADE GROUND: Brown very sandy GRAVEL. Gravel is fine to medium angular comprising slag, mudstone, sandstone, shale and occasional concrete.		
				5.36	1	1.00	End of Pit at 1.000m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AV33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336653E - 186431N Level: 6.39	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 3.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.29		0.10	MADE GROUND: Brown sandy clayey GRAVEL.Gravel is fine to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare concrete and occassional roots.		
							MADE GROUND: Brown sandy clayey GRAVEL. Gravel is medium to coarse angular to subangular of slag, mudstone, sandstone and occassional wood fragments.		
				5.79		0.60	MADE GROUND: Brown sandy GRAVEL.Gravel is fine to medium angular to subangular of slag mudstone and occassional pig iron fragments.		
					1				
					2				
				4.19		2.20	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is medium to coarse angular to subrounded of fused slag.		
				3.39	3	3.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				3.29		3.10	End of Pit at 3.100m		
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AV34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336651E - 186406N Level: 6.30	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.90	0.40	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
						MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subangular of slag, occassional sandstone and mudstone.		
				4.50	1.80	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.20	2.10	End of Pit at 2.100m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AV35
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336649E - 186381N Level: 6.50	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.50	1	1.00	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone and lime.		
							MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, shale and lime.		
				4.50	2	2.00	End of Pit at 2.000m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AV36**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336647E - 186356N Level: 6.50	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.20		0.30	MADE GROUND: Brown very sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, sandstone with occassional shale and rare chert.		
							MADE GROUND: Brown very sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag and sandstone and lime.		
					1				
				5.20		1.30	End of Pit at 1.300m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AV37**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336644E - 186331N Level: 6.92	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.60	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.42		0.50	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
					1		MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium subangular to subrounded comprising slag with occassional sandstone, shale and mudstone.		
				5.32		1.60	End of Pit at 1.600m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AW31**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336682E - 186479N Level: 6.52	Date 05/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.20	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.32	1 2 3 4 5	0.20	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is coarse angular to subangular comprising slag and rare mudstone. End of Pit at 0.200m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AW32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336680E - 186454N Level: 6.58	Date 13/07/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.28		0.30	MADE GROUND: Brown sandy GRAVEL.Gravel is fine to medium subangular to subrounded comprising slag with occassional sandstone, shale and mudstone.		
							MADE GROUND: Brown sandy GRAVEL. Gravel is medium to coarse angular to subangular comprising slag, mudstone, sandstone, shale and occasional concrete and rootets.		
				5.58	1	1.00	End of Pit at 1.000m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AW33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336678E - 186429N Level: 6.36	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.46	1	0.90	MADE GROUND: Brown sandy GRAVEL.Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
							MADE GROUND: Brown sandy GRAVEL.Gravel is fine to coarse angular to subrounded comprising slag, frequent shale and occassional		
				4.56	2	1.80	End of Pit at 1.800m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AW34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336676E - 186404N Level: 6.54	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.00	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
				5.54	1	1.00	MADE GROUND: Brown sandy GRAVEL.Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
				4.54	2	2.00	End of Pit at 2.000m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AW35**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336674E - 186379N Level: 6.93	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 0.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.43		0.50	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising various slags, mudstone and shale.		
							End of Pit at 0.500m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AW36**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336671E - 186354N Level: 6.58	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.60	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.28		0.30	MADE GROUND: Brown and white very sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and lime		
					1		MADE GROUND: Brown and white very sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and lime.		
				4.98		1.60	End of Pit at 1.600m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AW37
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336669E - 186329N Level: 6.94	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				6.64		0.30	MADE GROUND: Brown very sandy CLAY. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
					1		MADE GROUND: Brown very sandy CLAY. Gravel is fine to coarse angular to subrounded comprising various slags, mudstone and shale.		
				5.44		1.50	End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AX31**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336707E - 186477N Level: 6.37	Date 29/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.87	0.50	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with rare wood.		
				5.67	0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional mudstone and shale.		
						MADE GROUND: Black sandy GRAVEL.Gravel is medium to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare concrete.		
				4.57	1.80	End of Pit at 1.800m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AX32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336705E - 186452N Level: 6.28	Date 29/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.40	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.98	0.30	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
				4.98	1.30	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
				3.98	2.30	MADE GROUND: Brown sandy CLAY.Gravel is medium to coarse subangular to subrounded comprising slag with occassional mudstone, shale and rare chert.		
				3.88	2.40	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
						End of Pit at 2.400m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AX33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336703E - 186427N Level: 6.20	Date 07/06/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.60	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.40	0.80	MADE GROUND: Brown very sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising various slags, mudstone and shale.		
				4.60	1.60	MADE GROUND: Brown very sandy clayey GRAVEL.Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
						End of Pit at 1.600m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AX34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336700E - 186402N Level: 6.14	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.44	0.70	MADE GROUND: Brown slightly sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
				4.84	1.30	MADE GROUND: Light brown slightly sandy GRAVEL. Gravel is medium angular to subangular comprising slag with occassional sandstone, shale and mudstone.		
						End of Pit at 1.300m		

1 2 3 4 5

Remarks:

Stability: Stable sides

AGS

Trial Pit Log

TrialPit No **AX35**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336698E - 186377N Level: 5.98	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.20	Logged

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				5.48	0.50	MADE GROUND: Brown sandy clayey GRAVEL.Gravel is fine to medium subangular to subrounded comprising slag with occassional sandstone, shale and mudstone.		
						MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional mudstone and shale.		
				4.78	1.20	End of Pit at 1.200m		

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No
AX36
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336696E - 186352N Level: 6.42	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.50	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
				5.82		0.60	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to medium angular comprising of slag and rare shale and mudstone.		
					1		MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subangular of fused slag.		
				4.92		1.50	End of Pit at 1.500m		
					2				
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AX37**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336694E - 186327N Level: 6.94	Date 30/05/2022
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.10	Logged

Samples & In Situ Testing				Level (m)		Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results						
							MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
				5.94	1	1.00	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag with occassional mudstone and shale.		
				4.94	2	2.00	TIDAL FLAT DEPOSITS - Soft bluish grey CLAY.		
				4.84		2.10	End of Pit at 2.100m		
					3				
					4				
					5				

Remarks:

Stability: Stable sides

Trial Pit Log

TrialPit No **AL32**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336406E - 186494N Level: 6.43	Date 28/01/2021
Location: Llanwern		Dimensions (m): 2.50 × 1.50 Depth 1.30	Scale 1:25
Client: St Modwen Developments			Logged ET

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.23	0.20	MADE GROUND - Brown sandy gravelly CLAY.		
				6.03	0.40	MADE GROUND - Black clayey sandy GRAVEL. Gravel is fine to coarse, subangular to subrounded of various lithologies including slags, concrete, sandstone, mudstone and brick.		
0.50 0.50		B ES				MADE GROUND - Brown sandy GRAVEL of slag. Slag is fused.		▼
				5.33	1.10	TIDAL FLAT DEPOSITS- Soft grey CLAY.		
				5.13	1.30	End of Pit at 1.300m		

Remarks:

Stability:

Trial Pit Log

TrialPit No **AW26**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336676E - 186612N Level: 6.41	Date 12/01/2021
Location: Llanwern		Dimensions (m): 2.50 × 1.50 Depth 1.30	Scale 1:25
Client: St Modwen Developments			Logged ET

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
0.50 0.50		B ES		5.81	0.60	MADE GROUND - Brown sandy gravelly CLAY.		
						MADE GROUND - Greyish black sandy GRAVEL. Gravel is fine to coarse, subangular to subrounded of various lithologies including slags, bricks, mudstone and concrete. Inclusions of timber.		
				5.11	1.30	End of Pit at 1.300m		

1 2 3 4 5

Remarks: 1. Hand Pit for Leachable Lead Sampling. 2. Excavation backfilled with arisings on completion.

Stability:

Trial Pit Log

TrialPit No **AV28**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336670E - 186561N Level: 6.54	Date 13/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.60	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
0.30	AV28 -1	ES		5.74	0.80	MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
1.20	AV28 -1	B				MADE GROUND: Black sandy GRAVEL. Gravel is fine to coarse angular to subangular comprising of various slags with occasional concrete, brick and sandstone.		
1.20	AV28 -2	ES				*Concrete Pile.*		
2.20	AV28 -3	ES		4.94	1.60	MADE GROUND: Grey black sandy GRAVEL. Gravel is fine to coarse angular to subangular comprising various slags, mudstone and occasional concrete.		
				3.94	2.60	End of Pit at 2.600m		

Remarks:

Stability:

Trial Pit Log

TrialPit No **AV29**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336671E - 186548N Level: 6.56	Date 13/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 2.20	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
						MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone, shale and occasional concrete.		
				5.96	0.60			
0.80	AV29 -1	ES				MADE GROUND: Black clayey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising various slags, mudstone and shale.		
						Concrete Pile.		
				4.96	1.60			
1.70	AV29 -1	B		4.96	1.60	MADE GROUND: Black clayey sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising various slags, mudstone and shale.		
1.70	AV29 -2	ES				MADE GROUND: Grey black cobbly GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag, mudstone, sandstone and brick fragments.		
				4.46	2.10	TIDAL FLAT DEPOSITS: Soft to firm bluish grey and black CLAY.		
				4.36	2.20	End of Pit at 2.200m		

1 2 3 4 5

Remarks:

Stability:

AGS

Trial Pit Log

TrialPit No **AW29**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336698E - 186546N Level: 6.58	Date 13/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
				6.48	0.10	MADE GROUND: Light brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded comprising various slags, mudstone and sandstone.		
						MADE GROUND: Black and brown sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising slag and mudstone.		
0.60	AW2 9-1	ES		5.88	0.70	MADE GROUND: Brown sandy GRAVEL. Gravel is fine to coarse angular to subrounded comprising slag and mudstone.		
1.30	AW2 9-1	B		5.28	1.30	End of Pit at 1.300m		
1.30	AW2 9-2	ES						

1 2 3 4 5

Remarks:

Stability:

Trial Pit Log

TrialPit No: **AK33**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336389E - 186468N Level: 6.20	Date 29/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
0.20	AK33 -1	ES		6.00	0.20	MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				5.90	0.30	MADE GROUND: Black to dark brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
						MADE GROUND: Brown sandy gravelly CLAY. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with cobbles at depth.		
1.00	AK33 -1	B						
				4.90	1.30	*Refusal due to hard ground and low recovery on large cobbles / boulders.*		
						End of Pit at 1.300m		

Remarks:

Stability:

Trial Pit Log

TrialPit No: **AM33**
Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336432E - 186453N Level: 6.47	Date 13/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.30	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
0.30	AM3 3-1	ES		6.27	0.20	MADE GROUND: Brown gravelly sandy CLAY. Gravel is fine to coarse angular to subangular comprising of various slags.		
				5.87	0.60	MADE GROUND: Black sandy gravelly CLAY. Gravel is fine to coarse angular to subrounded comprising various slags.		
1.30	AM3 3-1	B		5.17	1.30	MADE GROUND: Brown and black sandy GRAVEL. Gravel is fine to coarse angular to subangular of slag.		
1.30	AM3 3-2	ES				End of Pit at 1.300m		

1
2
3
4
5

Remarks: 1. Hand Pit for Leachable Lead Sampling. 2. Excavation backfilled with arisings on completion.

Stability:

Trial Pit Log

TrialPit No: **AK34**

Sheet 1 of 1

Project Name: LLanwern Reclamation	Project No. P18-669	Co-ords: 336388E - 186443N Level: 6.33	Date 29/01/2021
Location: Llanwern		Dimensions (m):	Scale 1:25
Client: St Modwen Developments		Depth 1.80	Logged DM

Samples & In Situ Testing				Level (m)	Depth (m)	Stratum Description	Legend	Water Strike
Depth	Ref.	Type	Results					
0.00	AK34 -1	ES		6.03	0.30	MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
				5.53	0.80	MADE GROUND: Black sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone.		
1.60	AK34 -1	B				MADE GROUND: Brown sandy clayey GRAVEL. Gravel is fine to coarse subangular to subrounded of slag, sandstone, shale and mudstone with occasional cobbles of slag and occasional metal fragments.		
1.60	AK34 -2	ES		4.53	1.80	*Concrete Pile with rebar (W of pit).*		
						Pit terminated die to water ingress and collapsing sides.		
						End of Pit at 1.800m		

Remarks:

Stability:

Appendix G
Chemical Testing and Laboratory Certificates

Appendix H

Geotechnical Testing and Laboratory Certificates

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Job No.:		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750	22-20750
					Sample ID.:		1440202	1440203	1440204	1440205	1440206	1440207	1440208	1440209	1440210	1440211	1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651	1441657	1441658	1441659	1441660	1441661	1441662	1441663
					Client Sample Ref.:		AW34-1	AW34-2	AV34-1	AV34-2	AV35-1	AV35-2	AV36-1	AV36-2	AV37-1	AV37-2	AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2	AR35-2	AR35-1	AQ37-2	AR34-2	AR34-1	AQ35-1	AQ37-1
					Sample Type:	S4UL residential with plant uptake (1% SOM)	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):																											
					Bottom Depth (m):		1.00	2.00	0.40	1.80	1.00	2.00	0.30	1.30	0.50	1.60	1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00	1.30	0.60	1.50	2.00	0.50	0.50	0.80
					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	30-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	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:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		COVENTRY		COVENTRY		COVENTRY		COVENTRY		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		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	%	0.020			13	10	6.3	13	8.8	9.6	12	7.2	11	6.8	13	24	1.4	14	22	5.8	18	6.2	19	9.2	7.1	8.7	13	8.0	12	13
Soil Colour	N	2040		N/A			Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Beige	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Black	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	Gravel	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	M	2010		4.0			9.8	10.8	10.5	10.1	10.7	10.6	10.0	10.3	10.9	11.0	9.9	9.4	> 12.0	9.6	10.2	10.5	11.5	11.3	10.5	10.6	9.4	9.2	11.1	11.6	11.0	10.8
Cyanide (Total)	M	2300	mg/kg	0.5			< 0.50	0.50	1.5	4.0	5.2	3.1	8.0	< 0.50	10	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	14	4.4	1.3	2.1	3.5	3.7	< 0.50	2.7	11	6.9	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.5			1.5	0.78	1.1	2.3	0.78	0.64	0.58	4.4	1.0	< 0.50	6.6	16	0.93	68	2.4	1.4	2.2	1.3	1.6	2.7	1.6	16	2.3	0.86	0.74	6.8
Iron (Total)	N	2430	mg/kg	100			5400	5500	7800	6200	4900	8700	9000	6100	7800	12000	21000	19000	4300	17000	26000	26000	24000	24000	23000	22000	23000	19000	15000	22000	20000	15000
Arsenic	M	2450	mg/kg	1	37		2.6	1.9	3.1	2.0	1.9	2.0	2.1	1.3	2.3	1.2	12	29	3.1	12	18	13	6.0	7.9	19	15	7.1	12	24	7.0	10	9.3
Cadmium	M	2450	mg/kg	0.1	26		0.3	0.1	0.1	0.3	0.4	0.2	0.4	0.3	< 0.10	0.3	0	0	0.3	0	5	1	0.8	0.6	1	0	0.6	0	1	0.8	1	0.4
Chromium	M	2450	mg/kg	1	910		15.0	13.0	23.0	13.0	12.0	22.0	22.0	12.0	35.0	55.0	26	15	15.0	13	60	36	68.0	82.0	150	41	54.0	46	34	100.0	49	22.0
Manganese	M	2450	mg/kg	5			2100	2200	3000	1900	2000	3300	2800	3000	2600	3900	1300	270	430	480	2900	19000	4900	4200	5700	2100	3200	2500	2700	4100	1900	1100
Copper	M	2450	mg/kg	0.5	2400		12.0	7.1	7.7	9.9	6.4	6.1	11.0	6.0	5.4	5.3	30	50	10.0	16	110	16	17.0	20.0	83	35	23.0	47	20	25.0	43	23.0
Mercury	M	2450	mg/kg	0.1	40		< 0.05	< 0.05	< 0.05	0.1	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0	0	< 0.05	0	2	0	0.1	0.3	0	0	0.3	0	0	0.8	1	0.2
Nickel	M	2450	mg/kg	0.5	130		5.8	3.3	4.7	5.6	3.6	3.6	5.9	3.7	3.9	3.7	18	28	5.2	20	44	24	16.0	17.0	33	20	18.0	25	10	16.0	21	15.0
Lead	M	2450	mg/kg	0.5	200		45.0	16.0	24.0	40.0	33.0	29.0	38.0	34.0	12.0	25.0	97	44	17.0	31	970	41	82.0	63.0	160	120	150.0	52	59	140.0	180	77.0
Selenium	M	2450	mg/kg	0.2	250		0.7	1.3	1.5	0.7	0.5	0.3	0.6	0.3	0.8	0.3	2	3	0.5	1	2	2	0.6	1.0	2	1	1.2	1	3	0.9	1	1.3
Vanadium	U	2450	mg/kg	5	410		26.0	20.0	36.0	23.0	17.0	27.0	26.0	15.0	35.0	55.0	45	26	12.0	21	49	78	88.0	81.0	110	46	46.0	88	42	83.0	50	25.0
Zinc	M	2450	mg/kg	0.5	3700		90.0	41.0	54.0	180.0	76.0	110.0	130.0	140.0	25.0	46.0	160	73	39.0	33	5700	170	220.0	140.0	240	220	280.0	97	150	290.0	320	110.0
Organic Matter	M	2625	%	0.4			15	3.3	3.3	7.9	5.0	5.3	11	6.6	4.7	2.1	12	22	13	6.2	14	3.8	9.7	4.7	28	15	13	9.1	2.4	6.6	10	8.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	42		< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	100		< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	27		< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	130		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.3	< 1.0	< 1.0	19.0	< 1.0	< 1.0	< 1.0	< 1.0	5	< 1.0	< 1.0	< 1.0	< 1.0	4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	1100		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14.0	< 1.0	< 1.0	18.0	< 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	5.7
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	65000		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16.0	< 1.0	< 1.0	64.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 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	65000		< 1.0	< 1.0	< 1.0	< 1.0	72.0	< 1.0	140.0	< 1.0	< 1.0	140.0	< 1.0	< 1.0	< 1.0	< 1.0	80	< 1.0	< 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	65000		< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5			< 5.0	< 5.0	< 5.0	< 5.0	72	< 5.0	170	< 5.0	< 5.0	240	< 5.0	< 5.0	< 5.0	< 5.0	110	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.7
Aromatic TPH >C5-C7	N	2680	mg/kg	1	70		< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	1	130		< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	34		< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	1	74		< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	1	140		< 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	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1	260		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.7	< 1.0	< 1.0	11.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1	1100		< 1.0	< 1.0	< 1.0	< 1.0	57.0	< 1.0	84.0	< 1.0	< 1.0	120.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12	120.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	1100		< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5			< 5.0	< 5.0	< 5.0	< 5.0	57	< 5.0	86	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	12	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10			< 10	< 10	< 10	< 10	130	< 10	260	< 10	< 10	370	< 10	< 10	< 10	< 10	110	< 10	< 10	< 10	< 10	16	130	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1	87		< 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
Toluene	M	2760	µg/kg	1	130000		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	< 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
Ethylbenzene	M	2760	µg/kg	1	47000		< 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
m & p-Xylene	M	2760	µg/kg	1	56000		< 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
o-Xylene	M	2760	µg/kg	1	60000		< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.1	15		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.4	0.6	< 0.10	0.6	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	0.4	1	1	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	170		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.6	< 0.10	2.7	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	0.4	0	2	4.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	210		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.2	< 0.10	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	170		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.2	0.2	< 0.10	0.4	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	0.2	< 0.10	0	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	95		0.6	0.6	< 0.10	0.7	1.4	1.1	0.9	1.2	0.2	2.9	1	0	< 0.10	0	1	1	1.0	2.3	1	4	2.6	1	< 0.10	1.0	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	2400		0.1	0.1	< 0.10	0.4	0.5	1.5	0.4	0.6	< 0.10	4.3	0	< 0.10	< 0.10	< 0.10	1	0	0.6	0.6	0	2	1.6	0	< 0.10	0.2	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	280		0.9	0.6	< 0.10	0.7	3.5	6.8	2.9	3.5	0.2	23.0	1	0	< 0.10	1	3	2	4.1	5.7	1	14	15.0	1	< 0.10	1.0	0	0.5
Pyrene	M	2800	mg/kg	0.1	620		0.8	0.6	< 0.10	0.7	2.9	6.7	2.4	3.3	0.2	24.0	0	0	< 0.10	0	4	2	4.3	4.3	1	11	14.0	1	< 0.10	0.9	0	0.5
Benzo[a]anthracene	M	2800	mg/kg	0.1	7.2		0.4	0.3	< 0.10	0.6	2.0	4.7	1.8	2.9	0.1	15.0	0	< 0.10	< 0.10	0	3	1	3.1	2.4	0	7	11.0	1	< 0.10	0.6	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	15		0.3	0.4	< 0.10	0.5	1.8	6.4	2.0	3.9	0.2	21.0	0	< 0.10	< 0.10	0	3	1	4.8	2.6	0	7	11.0	1	< 0.10	0.5	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	2.6		0.7	0.3	< 0.10	0.5	3.3	9.2	2.3	5.8	0.2	33.0	1	< 0.10	< 0.10	0	7	2	7.3	3.1	1	14	28.0	< 0.10	< 0.10	0.8	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	77		0.3	0.2	< 0.10	0.2	1.2	2.8	0.8	1.8	0.1	11.0	0	< 0.10	< 0.10	< 0.10	2	1	2.4	1.1	0	4	9.2	< 0.10	< 0.10	0.3	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.2		0.3	0.4	< 0.10	0.5	2.5	7.1	1.9	4.5	0.2	26.0	1	< 0.10	< 0.10	0	5	1	5.7	2.1	0	11	22.0	< 0.10	< 0.10	0.7	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	27		< 0.10	< 0.10	< 0.10	0.5	2.4	6.5	1.4	4.2	< 0.10	23.0	0	< 0.10	< 0.10	< 0.10	4	1	5.4	1.7	0	10	22.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.24		< 0.10	< 0.10	< 0.10	0.3	0.5	1.0	0.4	0.7	< 0.10	3.9	0	< 0.10	< 0.10	< 0.10	1	0	0.9	0.4	0	2	3.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	320		< 0.10	< 0.10	< 0.10	0.6	2.1	5.8	1.4	4.0	< 0.10	22.0	0	< 0.10	< 0.10	< 0.10	5	1	5.0	1.6	0	9	18.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2			4.5	3.4	< 2.0	6.0	24	60	19	38	< 2.0	210	5.0	< 2.0	< 2.0	2.1	42	12	45	29	6.4	98	160	3.5	< 2.0	5.9	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	280		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	1.1	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1			< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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				Job No.:	22-20750	22-20750	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20752	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20772	22-20772	22-20772	22-20772	22-20772	22-20772	22-20755	22-20755	22-20755
				Sample ID.:	1441664	1441665	1441669	1441670	1441671	1441672	1441673	1441674	1441675	1441676	1441700	1441701	1441702	1441703	1441704	1441705	1441706	1441707	1441789	1441790	1441791	1441792	1441793	1441794	1441683	1441684	1441685
				Client Sample Ref.:	AT37-1	AQ35-2	AT35-1	AT35-2	AU34-2	AU34-1	AT34-2	AS36-1	AU36-1	AU35-1	AQ36-2	AQ34-1	AO37-1	AO37-2	AN36-2	AN36-1	AQ34-2	AQ36-1	AT36-2	AU37-1	AT37-2	AT36-1	AU37-2	AN35-2	AP37-1	AP35-2	AP35-1
				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):																											
				Bottom Depth (m):	0.80	2.00	0.5	1.4	2.3	0.5	1.5	1	0.7	0.5	2	0.5	0.3	1.8	2	0.5	1.5	0.5	1.8	0.6	1.8	0.4	1.7	1	0.20	1.20	0.50
				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	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	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	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	DURHAM	COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																											
ACM Type	U	2192		N/A																			Chrysotile (Fibres/ Clumps)								
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		Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		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	8.6	21	10	13	14	6.5	9.5	7.6	6.4	15	17	1.7	2.8	7.8	9.1	5.0	7.7	4.8	12	9.8	13	6.6	11	13	3.2	32	11
Soil Colour	N	2040		N/A	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Grey	Brown	Grey	Black	Black	Black	Brown	Brown	Black	Brown	Black	Grey
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 and Roots	Stones	Stones	Stones	None	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	9.2	> 12.0	> 12.0	10.2	10.3	11.2	11.7	11.8	> 12.0	8.9	11.4	9.7	10.9	9.0	10.7	> 12.0	11.4	> 12.0	11.2	11.3	12.0	> 12.0	11.2	9.7	8.6	11.3
Cyanide (Total)	M	2300	mg/kg	0.5	5.9	8.5	14	5.4	0.70	1.5	2.7	1.8	18	12	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2	0.60	2.5	0.70	8.7	3.3	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	0.78	40	1.0	0.65	12	2.2	0.76	0.58	1.1	2.1	15	0.86	1.0	3.3	18	1.1	0.93	< 0.50	0.86	1.7	1.6	1.5	1.3	1.6	2.3	1.6	5.2
Iron (Total)	N	2430	mg/kg	100	21000	22000	23000	22000	19000	20000	12000	24000	25000	22000	19000	8100	14000	13000	25000	12000	13000	14000	11000	22000	14000	22000	13000	21000	19000	16000	13000
Arsenic	M	2450	mg/kg	1	3.9	17	12	8.8	17	8.0	6.9	6.0	5.2	12	18	2.4	5.3	5.7	19	5.3	26	4.2	6.2	6.5	5.4	6.8	8.1	12	6.4	34	8.3
Cadmium	M	2450	mg/kg	0.1	0.7	0	1	0.8	0	0.4	0.2	0.1	0.3	0	0	0.2	0.3	0.1	0	0.2	2	0.5	0.2	0.7	0.2	0.5	0.3	0	0.6	1	0.6
Chromium	M	2450	mg/kg	1	230.0	19	270	110.0	15	39.0	34.0	540.0	89.0	29	15	6.1	12.0	27.0	13	23.0	17	66.0	28.0	110.0	19.0	230.0	40.0	48	22.0	19	34.0
Manganese	M	2450	mg/kg	5	9200	620	9900	5000	480	2400	2500	14000	4900	2100	350	250	3900	1400	990	910	2400	3000	2100	5500	660	9500	1100	2000	1600	430	1600
Copper	M	2450	mg/kg	0.5	51.0	37	46	37.0	27	13.0	16.0	13.0	14.0	22	42	4.8	6.9	15.0	33	5.4	13	11.0	18.0	21.0	17.0	23.0	29.0	32	14.0	62	47.0
Mercury	M	2450	mg/kg	0.1	0.2	0	0	0.2	0	0.1	0.1	< 0.05	0.2	0	0	0.1	0.1	< 0.05	0	< 0.05	0	0.1	0.1	0.1	< 0.05	0.1	0.1	0	0.1	0	0.1
Nickel	M	2450	mg/kg	0.5	16.0	36	29	38.0	18	13.0	16.0	10.0	11.0	22	19	3.2	7.8	14.0	37	7.7	10	33.0	11.0	16.0	16.0	13.0	24.0	21	12.0	31	15.0
Lead	M	2450	mg/kg	0.5	61.0	30	170	80.0	35	41.0	22.0	12.0	32.0	34	80	29.0	26.0	24.0	27	17.0	62	50.0	27.0	60.0	14.0	60.0	29.0	51	51.0	58	77.0
Selenium	M	2450	mg/kg	0.2	0.5	2	1	0.5	1	0.7	2.7	< 0.25	0.4	1	1	< 0.25	< 0.25	1.4	1	< 0.25	0	0.3	2.6	1.0	0.8	0.5	0.8	1	0.4	3	0.8
Vanadium	U	2450	mg/kg	5	330.0	34	170	76.0	21	41.0	36.0	320.0	87.0	33	22	6.8	12.0	52.0	25	24.0	24	58.0	43.0	100.0	27.0	200.0	37.0	46	27.0	40	66.0
Zinc	M	2450	mg/kg	0.5	290.0	62	560	210.0	59	110.0	48.0	40.0	130.0	120	70	61.0	42.0	42.0	61	33.0	140	85.0	75.0	150.0	30.0	190.0	45.0	79	140.0	130	270.0
Organic Matter	M	2625	%	0.4	8.3	14	8.3	7.8	17	6.0	3.3	6.0	2.9	5.2	31	4.7	1.0	2.4	5.5	6.0	7.4	10	5.9	7.8	9.3	2.1	2.6	12	8.3	31	9.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.8	< 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	12	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	32.0	< 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	30	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	84.0	< 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	200	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3000.0	< 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	830	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	630.0	< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3800	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1100	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	500.0	< 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	180	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	33.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	530	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	180	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	4300	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	1300	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	22	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.9	6.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	6.8	< 1.0	6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.0	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.9	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.3	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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	0.1	0.9	< 0.10	3	1.2	< 0.10	0.8	0.4	< 0.10	0.5	0	1	0.1	0.2	0.5	< 0.10	0.3	1	0.5	< 0.10	1.7	< 0.10	< 0.10	0.6	< 0.10	0.3	0	0.6
Anthracene	M	2800	mg/kg	0.1	0.4	< 0.10	1	0.4	< 0.10	0.2	0.2	< 0.10	0.6	0	0	< 0.10	< 0.10	0.1	< 0.10	< 0.10	0	< 0.10	< 0.10	1.5	< 0.10	< 0.10	0.9	< 0.10	0.2	< 0.10	0.1
Fluoranthene	M	2800	mg/kg	0.1	2.0	< 0.10	7	3.2	1	1.3	0.7	0.6	1.9	1	2	0.1	0.3	0.5	< 0.10	0.4	1	0.7	< 0.10	9.1	< 0.10	1.0	4.4	1	0.7	0	0.9
Pyrene	M	2800	mg/kg	0.1	1.9	< 0.10	7	3.2	1	0.9	0.6	0.6	2.3	1	1	0.1	0.2	0.3	< 0.10	0.3	1	0.6	< 0.10	9.3	< 0.10	1.1	3.5	1	0.7	0	0.8
Benzo[a]anthracene	M	2800	mg/kg	0.1	1.5	< 0.10	4	2.1	1	0.9	< 0.10	< 0.10	1.8	0	1	< 0.10	0.1	0.2	< 0.10	0.1	0	0.3	< 0.10	7.6	< 0.10	1.0	3.0	< 0.10	0.5	< 0.10	0.4
Chrysene	M	2800	mg/kg	0.1	1.3	< 0.10	4	2.0	1	0.6	< 0.10	< 0.10	2.0	1	1	< 0.10	0.2	0.2	< 0.10	0.2	0	0.4	< 0.10	9.6	< 0.10	1.0	4.4	< 0.10	0.6	< 0.10	0.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	1.8	< 0.10	8	3.6	< 0.10	1.1	< 0.10	< 0.10	4.4	1	1	< 0.10	< 0.10	0.3	< 0.10	0.2	1	0.6	< 0.10	17.0	< 0.10	1.8	5.7	< 0.10	1.1	< 0.10	0.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.6	< 0.10	3	1.3	< 0.10	0.4	< 0.10	< 0.10	1.5	0	0	< 0.10	< 0.10	0.1	< 0.10	0.1	0	0.2	< 0.10	5.9	< 0.10	0.5	1.8	< 0.10	0.4	< 0.10	0.1
Benzo[a]pyrene	M	2800	mg/kg	0.1	2.3	< 0.10	6	2.5	< 0.10	1.1	< 0.10	< 0.10	3.6	1	1	< 0.10	< 0.10	0.2	< 0.10	0.1	0	0.4	< 0.10	14.0	< 0.10	1.5	4.0	< 0.10	0.7	< 0.10	0.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	5	2.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.4	< 0.10	12.0	< 0.10	< 0.10	< 0.10	< 0.10	0.8	< 0.10	0.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	1	0.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.1	< 0.10	1.4	< 0.10	< 0.10	< 0.10	< 0.10	0.2	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	< 0.10	< 0.10	4	2.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.4	< 0.10	12.0	< 0.10	< 0.10	< 0.10	< 0.10	0.7	< 0.10	0.3
Total Of 16 PAH's	N	2800	mg/kg	2	13	< 2.0	56	24	2.2	7.3	< 2.0	< 2.0	19	6.5	8.6	< 2.0	< 2.0	2.6	< 2.0	< 2.0	4.0	4.4	< 2.0	100	< 2.0	7.9	28	< 2.0	7.0	< 2.0	4.7
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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					Job No.:	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373	22-21373
					Sample ID.:	1441686	1441687	1441688	1441689	1441690	1441691	1441718	1441719	1441720	1441721	1441722	1441723	1444570	1444571	1444572	1444573	1444574	1444575	1444576	1444577	1444540	1444541	1444542	1444543	1444544	1444545	1444546
					Client Sample Ref.:	AP37-2	AP36-2	AP36-1	AS36-2	AU36-2	AU35-2	AT34-1	AO36-1	AN35-1	AP34-1	AO36-2	AP34-5	AX33-1	AX33-2	AW33-1	AW33-2	AV33-1	AV33-2	AV33-3	AV33-4	AU33-1	AT33-1	AT33-2	AS33-1	AS33-2	AR33-1	AR33-2
					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):							0.70	0.50	0.30	0.60	1.80	1.90	0.80	1.60	0.90	1.80	0.60	3.00	2.20	0.10	0.90	1.20	2.00	1.20	2.00	0.90	1.60
					Bottom Depth (m):	1.80	1.50	0.70	1.80	1.30	1.50																					
					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	31-May-2022	31-May-2022	31-May-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	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022
					Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY	COVENTRY		COVENTRY		COVENTRY	COVENTRY	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																												
ACM Type	U	2192		N/A												Chrysotile (bitumen)																
Asbestos Identification	U	2192		N/A			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		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												0.063																
Total Asbestos	U	2192	%	0.001												0.063																
Moisture	N	2030	%	0.020	11	27	6.9	9.1	15	14	8.9	7.3	11	7.7	8.4	12	12	10	12	8.1	5.2	7.5	8.7	5.4	6.5	7.4	11	13	13	5.9	31
Soil Colour	N	2040		N/A	Brown	Black	Brown	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	White
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 and Roots	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	Sand	Chalk
pH	M	2010		4.0	10.9	8.3	9.0	> 12.0	11.6	12.0	10.8	> 12.0	11.6	11.4	10.2	10.5	9.6	9.8	9.1	9.5	9.3	10.3	9.7	8.9	11.0	10.5	10.8	12.0	9.7	9.7	12.0
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50	< 0.50	4.5	14	45	1.6	< 0.50	< 0.50	0.70	< 0.50	< 0.50	1.9	0.70	< 0.50	< 0.50	< 0.50	< 0.50	1.9	2.0	4.5	2.6	3.5	1.8	1.5	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	0.70	6.9	12	1.4	2.0	1.2	0.93	0.58	0.86	2.6	2.0	1.3	40	4.4	2.0	1.0	10	0.86	0.75	2.9	1.2	4.7	0.86	71	1.3	0.93	1.7
Iron (Total)	N	2430	mg/kg	100	14000	15000	17000	15000	21000	20000	8700	10000	18000	9600	21000	11000	18000	16000	26000	17000	28000	15000	30000	24000	25000	18000	19000	19000	21000	27000	2100
Arsenic	M	2450	mg/kg	1	8.9	28	8.1	4.4	12	5.7	3.8	14	7.3	5.7	12	5.6	3.6	4.0	36	12	6.8	5.4	13	130	72	4.0	14	5.5	22	2.6	1.8
Cadmium	M	2450	mg/kg	0.1	0.2	1	0.8	0.6	0	0.6	< 0.10	0	0.4	0.1	0	< 0.10	0.5	1.7	0	0	0.3	0.3	0	1	1	0.4	0	0.1	0	0.2	< 0.10
Chromium	M	2450	mg/kg	1	23.0	17	22.0	55.0	57	74.0	24.0	8	76.0	25.0	17	27.0	28.0	38.0	46	16	14.0	33.0	21	47	66	11.0	11	22.0	12	220.0	19.0
Manganese	M	2450	mg/kg	5	2200	400	1300	2900	3700	3500	2000	330	2800	2100	660	3500	1300	1100	7400	4200	2000	3100	2500	22000	17000	2000	1300	2600	510	1600	240
Copper	M	2450	mg/kg	0.5	38.0	48	21.0	27.0	29	21.0	10.0	7	17.0	12.0	18	16.0	7.5	7.8	21	11	7.8	19.0	10	62	30	7.0	27	8.9	38	6.7	2.7
Mercury	M	2450	mg/kg	0.1	0.1	0	0.1	0.1	0	1.4	< 0.05	< 0.05	0.1	< 0.05	0	< 0.05	0.1	< 0.05	0	< 0.05	< 0.05	0.1	0	0	0	< 0.05	0	< 0.05	1	< 0.05	< 0.05
Nickel	M	2450	mg/kg	0.5	12.0	29	14.0	10.0	23	12.0	7.9	5	12.0	5.2	14	4.7	9.3	12.0	42	14	8.4	10.0	14	60	32	7.0	16	6.8	23	31.0	3.6
Lead	M	2450	mg/kg	0.5	190.0	47	99.0	51.0	56	33.0	19.0	19	27.0	20.0	25	16.0	61.0	98.0	25	15	75.0	33.0	36	40	25	26.0	50	20.0	41	16.0	7.1
Selenium	M	2450	mg/kg	0.2	3.4	3	0.9	0.5	1	0.7	1.4	< 0.25	1.7	3.6	1	3.7	1.0	1.0	1	1	0.6	1.4	1	1	2	2.2	2	2.3	5	0.3	0.3
Vanadium	U	2450	mg/kg	5	46.0	36	26.0	61.0	55	64.0	38.0	10	67.0	49.0	21	74.0	18.0	23.0	35	28	20.0	33.0	45	90	79	29.0	26	48.0	22	54.0	7.9
Zinc	M	2450	mg/kg	0.5	87.0	70	180.0	170.0	150	290.0	26.0	30	39.0	42.0	43	33.0	97.0	77.0	130	40	130.0	63.0	75	120	85	41.0	41	42.0	76	29.0	9.4
Organic Matter	M	2625	%	0.4	8.8	22	9.0	8.8	7.4	4.7	4.8	12	12	2.9	13	3.5	10	2.1	31	9.5	19	6.0	19	12	13	4.8	15	5.0	24	0.72	3.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	55.0	< 1.0	30	< 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	< 1.0	< 1.0	< 1.0	< 1.0	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	< 1.0	560.0	< 1.0	300	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	45.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	85	< 1.0	670.0	< 1.0	370	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	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	24.0	< 1.0	250	< 1.0	1800.0	120.0	1200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	730.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	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	< 1.0	< 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
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	24	< 5.0	340	< 5.0	3100	120	1900	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	910	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	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	< 1.0	< 1.0	< 1.0	71.0	< 1.0	41	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.3	< 1.0	< 1.0	< 1.0	91.0	< 1.0	33	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	190.0	< 1.0	780	< 1.0	120.0	< 1.0	73	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	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	< 1.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	200	< 5.0	780	< 5.0	280	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	20	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	< 10	< 10	< 10	< 10	51	< 10	< 10	< 10	< 10	< 10	< 10	< 10	230	< 10	1100	< 10	3400	120	2000	< 10	< 10	< 10	< 10	< 10	< 10	930	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	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	< 1.0	4	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	2	< 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	2	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	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	< 1.0	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.2	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	0.6	0	1.5	0.3	0	0.4	0.2	2	0.6	0.2	1	0.3	1.6	0.3	2	0	0.2	< 0.10	1	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	0.2	0	0.8	< 0.10	< 0.10	0.2	< 0.10	1	0.1	< 0.10	0	< 0.10	2.1	0.1	1	< 0.10	0.2	< 0.10	0	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.9	0	4.6	0.8	0	1.1	0.4	4	0.8	0.3	1	0.4	12.0	0.5	3	0	1.0	0.2	1	5	0	< 0.10	0	0.3	< 0.10	0.2	< 0.10
Pyrene	M	2800	mg/kg	0.1	0.7	0	3.9	0.7	1	1.2	0.4	3	0.7	0.3	1	0.3	11.0	0.6	2	0	0.8	0.2	1	4	0	< 0.10	0	0.2	< 0.10	0.2	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.3	< 0.10	2.3	0.5	0	1.1	0.2	2	0.4	0.1	0	0.2	8.1	0.4	1	0	< 0.10	< 0.10	0	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	0.4	< 0.10	2.1	0.5	0	1.4	0.3	2	0.5	0.1	0	0.2	8.8	0.4	2	0	< 0.10	< 0.10	0	2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.5	< 0.10	3.1	0.7	1	2.1	0.5	2	0.7	< 0.10	0	0.2	18.0	0.8	3	< 0.10	< 0.10	< 0.10	0	4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.2	< 0.10	1.2	0.3	0	0.7	0.2	1	0.2	< 0.10	0	0.1	6.5	0.2	1	< 0.10	< 0.10	< 0.10	0	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.4	< 0.10	2.7	0.4	0	1.4	0.2	2	0.5	< 0.10	0	0.2	15.0	0.5	1	< 0.10	< 0.10	< 0.10	0	3	< 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	0.1	0.4	< 0.10	1.9	0.4	1	1.3	0.2	1	0.3	< 0.10	0	< 0.10	16.0	0.7	1	< 0.10	< 0.10	< 0.10	0	3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	0.2	0.2	0.34	0.5	0.1	0	0.1	< 0.10	0	< 0.10	2.2	0.1	0	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.2	< 0.10	1.6	0.4	0.27	1.2	0.3	1	0.4	< 0.10	0	< 0.10	13.0	0.6	1	< 0.10	< 0.10	< 0.10	0	2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	4.7	< 2.0	26	5.1	4.2	13	3.0	20	5.3	< 2.0	4.6	< 2.0	110	5.2	21	< 2.0	2.3	< 2.0	4.4	36	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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					Job No.:	22-21373	22-21373	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-25621	22-26760	22-26760	22-26760	22-26760	22-26760	22-26760	22-29945	22-29945	22-29945	22-29945	22-31543	22-31543	22-31543
					Sample ID.:	1444547	1444548	1459497	1459498	1459499	1459500	1459501	1459502	1459503	1459504	1459505	1459506	1459507	1463371	1468354	1468355	1468356	1468357	1468358	1468359	1482829	1482830	1482831	1482833	1490065	1490066	1490069
					Client Sample Ref.:	AQ33-1	AQ33-2	AX32-1	AX32-2	AX32-3	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2	AX31-1	AX31-2	AW31-1	AV31-1	AV32-1	AW32-1	AO33-1	AO32-1	AO32-2	AR32-1	AS32-1	AT32-1	AV30-1	AQ32-1	AQ23-2	AU32-1
					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):	0.60	1.70	0.3	1.3	2.3	0.5	1.5	0.3	1.3	0.3	1.0	0.5	1.8	0.2	0.70	1.00	1.00	1.70	2.00	2.90	0.5	1.3	1.3	1.0	0.50	1.00	0.30
					Bottom Depth (m):	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.70	1.00	1.00	1.70	2.00	2.90	-	-	-	-	-	-	-
					Date Sampled:	07-Jun-2022	07-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	29-Jun-2022	29-Jun-2022	29-Jun-2022	05-Jun-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	13-Jul-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	04-Aug-2022	16-Aug-2022	16-Aug-2022	16-Aug-2022
					Asbestos Lab:		DURHAM	DURHAM		DURHAM		DURHAM		DURHAM		DURHAM								DURHAM		COVENTRY		COVENTRY	COVENTRY	DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																												
ACM Type	U	2192		N/A																			Amosite (Fibres/Clumps)								
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	Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		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	14	16	3.2	12	11	5.8	5.1	9.4	2.6	1.4	10	5.1	8.8	7.2	2.9	4.1	0.82	1.3	26	8.7	7.6	15	11	9.2	0.55	2.3	1.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Black	Brown	Black	Brown	Brown	Grey	Grey	Brown	Black	Black	Black	Brown	Grey	Brown	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Roots and Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Gravel	Gravel	Clay	Clay	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	11.1	11.5	9.2	11.8	8.8	11.0	9.5	11.1	10.3	8.9	10.0	11.4	10.5	10	9.6	10.1	9.0	10.3	8.9	10.0	10.1	9.8	9.1	9.6	7.8	7.8	7.6
Cyanide (Total)	M	2300	mg/kg	0.5	< 0.50	< 0.50	0.50	< 0.50	< 0.50	0.50	0.90	0.90	1.1	1.6	1.7	< 0.50	1.3	0.50	1.2	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	0.80	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	1.3	13	59	< 0.50	< 0.50	1.5	0.93	3.9	0.68	0.86	1.6	0.86	1.2	30.00	< 0.50	< 0.50	1.7	3.4	11	5.1	1.5	8.6	27	12	1.0	6.7	34
Iron (Total)	N	2430	mg/kg	100	23000	17000	22000	18000	17000	29000	28000	30000	11000	32000	28000	28000	30000	22000.00	110000	83000	91000	31000	35000	85000	39000	42000	88000	92000	80000	58000	53000
Arsenic	M	2450	mg/kg	1	8.4	5.2	110	3.6	13	8.9	1.8	6.3	1.5	7.3	6.4	5.3	7.9	13.00	8.2	17	280	9.1	19	9.6	7.7	10	11	28	4.3	5.7	24
Cadmium	M	2450	mg/kg	0.1	0.2	0.1	1	0.1	0	0.2	0.2	0.3	0.2	0.4	0.2	0.5	0.7	0.23	0.1	1	2	0.2	0	0.8	< 0.10	0	2	2	< 0.10	< 0.10	5
Chromium	M	2450	mg/kg	1	28.0	30.0	80	11.0	23	120.0	230.0	48.0	10.0	700.0	63.0	18.0	83.0	47.00	28.0	43	57	31.0	24	67.0	26.0	25	32	79	21.0	28.0	190
Manganese	M	2450	mg/kg	5	2300	1200	54000	2200	8600	120000	12000	3300	790	48000	4600	2900	4000	4100	2200	15000	76000	3300	2800	4200	1600	1700	2800	9500	2400	1100	6400
Copper	M	2450	mg/kg	0.5	17.0	11.0	55	8.4	39	22.0	12.0	14.0	2.8	23.0	15.0	11.0	21.0	16.00	13.0	26	200	24.0	23	21.0	21.0	15	29	27	9.4	9.1	130
Mercury	M	2450	mg/kg	0.1	0.1	< 0.05	0	< 0.05	0	0.1	0.1	0.1	< 0.05	0.2	0.1	0.1	0.1	0.05	< 0.05	0	0	0.1	0	0.2	< 0.05	0	0	0	< 0.05	< 0.05	9
Nickel	M	2450	mg/kg	0.5	16.0	9.9	56	7.4	9	36.0	4.5	21.0	5.3	16.0	16.0	9.0	10.0	17.00	11.0	24	270	13.0	20	19.0	11.0	15	22	41	14.0	18.0	41
Lead	M	2450	mg/kg	0.5	25.0	16.0	64	21.0	24	25.0	34.0	34.0	9.4	41.0	28.0	62.0	110.0	31.00	44.0	55	100	24.0	35	150.0	13.0	17	200	120	12.0	28.0	72
Selenium	M	2450	mg/kg	0.2	1.0	1.1	2	1.7	2	0.6	1.9	0.9	0.3	0.5	0.5	1.0	1.9	0.64	1.2	1	1	0.9	1	1.3	1.0	1	2	1	< 0.25	< 0.25	0
Vanadium	U	2450	mg/kg	5	39.0	29.0	100	26.0	47	98.0	220.0	49.0	11.0	660.0	67.0	29.0	190.0	45.00	40.0	80	160	55.0	46	98.0	37.0	43	48	78	58.0	36.0	200
Zinc	M	2450	mg/kg	0.5	51.0	48.0	320	45.0	49	99.0	60.0	90.0	20.0	70.0	66.0	190.0	230.0	90.00	74.0	130	270	55.0	72	330.0	30.0	39	380	390	35.0	100.0	820
Organic Matter	M	2625	%	0.4	24	6.7	3.8	21	11	64	11	11	5.7	1.9	2.6	28	14	50	67	47	41	9.1	34	24	16	17	24	26	5.6	1.8	12
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	< 1.0	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	330.0	84	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	1300.0	400	< 1.0	12.0	< 1.0	< 1.0	< 1.0	< 1.0	68.0	6.9	< 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
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	97	4900.0	1600	18.0	20.0	< 1.0	< 1.0	< 1.0	< 1.0	430.0	78.0	< 1.0	8.8	< 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
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	99	5200.0	1600	8.9	17.0	< 1.0	< 1.0	< 1.0	< 1.0	640.0	99.0	< 1.0	19.0	< 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
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	110.0	110.0	480	6800.0	2000	58.0	250.0	< 1.0	150.0	< 1.0	< 1.0	3400.0	270.0	< 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
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	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	< 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	110	110	670	19000	5700	85	300	< 5.0	150	< 5.0	< 5.0	4600	450	< 5.0	28	< 5.0	< 5.0	< 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	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	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	< 1.0	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	240.0	30	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	710.0	150	< 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
Aromatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	3200.0	840	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	110.0	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	3100.0	780	5.6	< 1.0	5.7	< 1.0	< 1.0	< 1.0	75.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1	85.0	87.0	27	2600.0	680	200.0	90.0	71.0	33.0	36.0	41.0	4400.0	76.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	55.0	< 1.0	5.6	6.7	< 1.0	< 1.0	< 1.0	< 1.0	2000.0	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	85	87	27	9800	2500	210	97	77	33	36	41	6500	76	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	190	200	700	29000	8100	290	400	77	190	36	41	11000	530	< 10	28	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	130	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.6	1.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	1.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.3	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	3.5	< 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
m & p-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	18.0	6	< 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
o-Xylene	M	2760	µg/kg	1	< 1.0	< 1.0	< 1.0	27.0	10	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	5.0	< 0.10	2.9	0.4	0.8	< 0.10	< 0.10	0.3	< 0.10	0.6	< 0.10	< 0.10	< 0.10	4	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	7.8	< 0.10	1.4	0.1	0.3	< 0.10	< 0.10	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	25.0	< 0.10	0.3	0.2	0.1	< 0.10	< 0.10	0.1	< 0.10	0.2	< 0.10	< 0.10	< 0.10	0	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	13.0	< 0.10	0.9	0.1	0.2	< 0.10	< 0.10	0.2	< 0.10	0.4	< 0.10	< 0.10	< 0.10	1	< 0.10	< 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	0.1	< 0.10	< 0.10	1	110.0	30	8.1	1.1	1.1	< 0.10	0.8	0.9	2.0	1.4	1.20	0.9	1	3	0.8	1	1.5	< 0.10	< 0.10	1	< 0.10	1.8	< 0.10	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	0	21.0	4	2.5	0.2	0.3	< 0.10	0.2	0.3	0.3	0.3	0.24	0.2	0	1	0.2	0	0.4	< 0.10	< 0.10	0	< 0.10	0.7	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.3	0.3	1	68.0	20	20.0	1.6	2.0	< 0.10	1.0	1.5	2.1	1.7	1.60	0.6	1	5	1.0	0	1.8	0.4	< 0.10	1	4	5.6	< 0.10	< 0.10	< 0.10
Pyrene	M	2800	mg/kg	0.1	0.2	0.2	1	51.0	14	14.0	1.3	1.6	< 0.10	0.9	1.6	1.7	1.1	1.30	0.6	1	4	0.8	0	1.5	0.4	< 0.10	0	3	3.8	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	20.0	5	9.3	0.9	1.1	< 0.10	0.6	1.0	0.7	0.5	0.86	0.4	1	3	0.5	< 0.10	0.7	< 0.10	< 0.10	< 0.10	3	2.2	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	18.0	5	9.2	0.9	1.0	< 0.10	0.7	0.9	0.9	0.4	0.96	0.3	1	3	0.4	< 0.10	0.9	< 0.10	< 0.10	< 0.10	2	2.0	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	17.0	5	12.0	1.4	1.8	< 0.10	< 0.10	1.5	1.2	0.7	1.60	0.5	1	4	0.8	< 0.10	1.1	< 0.10	< 0.10	< 0.10	6	3.0	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	6.1	2	4.1	0.4	0.7	< 0.10	< 0.10	0.5	0.4	0.3	0.60	0.2	0	1	0.3	< 0.10	0.5	< 0.10	< 0.10	< 0.10	2	1.0	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	13.0	3	8.2	0.9	1.2	< 0.10	< 0.10	0.9	0.7	0.4	0.98	0.4	0	3	0.5	< 0.10	0.7	< 0.10	< 0.10	< 0.10	4	1.6	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	6.5	2	7.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	2	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	1.5	0	1.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	0.49	< 0.10	< 0.10	< 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	0.1	< 0.10	< 0.10	< 0.10	6.0	2	6.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0	2.10	< 0.10	< 0.10	< 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	< 2.0	< 2.0	2.7	390	92	110	9.4	12	< 2.0	4.1	10	9.9	7.9	9.3	4.0	7.1	38	5.3	< 2.0	9.1	< 2.0	< 2.0	< 2.0	24	22	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	1	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	0.75	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	0.75	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88	< 0.10	< 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				Job No.:	22-32672	22-32672	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	21-41336	22-20454	22-20454	22-20454	22-20454	22-20454	21-41336	21-41336	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
				Sample ID.:	1494904	1494905	1557446	1557447	1557448	1557449	1557450	1557451	1557452	1557453	1557454	1326695	1440201	1440202	1440203	1440197	1440198	1326696	1326697	1440195	1440196	1440189	1440190	1440191	1440192	1440193	1440194
				Client Sample Ref.:	A034-1	AN34-1	AN37-1	AN37-2	AM37-1	AM37-2	AM36-1	AL36-1	AL36-2	AM35-1	AM34-1	AU31-1	AW35-1	AW34-1	AW34-2	AW37-1	AW37-2	AU30-1	AU30-2	AX34-1	AX34-2	AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2
				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):	1.50	1.00	1.00	2.00	0.80	2.00	0.80	0.90	2.00	1.70	0.20	0.4	0.50	1.00	2.00	0.30	1.50	0.5	1.1	0.70	1.30	1.00	2.00	0.60	1.50	0.50	1.20
				Bottom Depth (m):																											
				Date Sampled:	24-Aug-2022	24-Aug-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	19-Nov-2021	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	19-Nov-2021	19-Nov-2021	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			COVENTRY		COVENTRY		COVENTRY		COVENTRY	COVENTRY		DURHAM	DURHAM		DURHAM			COVENTRY	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	
Asbestos by Gravimetry	U	2192	%	0.001																											
Total Asbestos	U	2192	%	0.001																											
Moisture	N	2030	%	0.020	8.1	5.1	17	13	23	3.9	10	6.0	25	30	8.5	9.4	5.8	13	10	5.1	11	13	17	4.2	6.6	8.5	9.7	4	7.4	7.3	9.1
Soil Colour	N	2040		N/A	Grey	Grey	Grey	Brown	Brown	Brown	Brown	Grey	Black	Grey	Brown	Black	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones, Roots and Wood	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	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.1	10.3	12.0	11.8	9.4	9.4	8.6	9.4	8.3	8.5	10.8	10.4	10.8	9.8	10.8	11.6	11.1	10.3	10.7	10.5	9.7	9.7	8.8	9.4	10.4	9.3	10
Cyanide (Total)	M	2300	mg/kg	0.5	1.2	3.6	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	< 0.50	< 0.50	1.2	2.7	< 0.50	< 0.50	0.5	< 0.50	< 0.50	1.6	20	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	< 0.50	1.3	< 0.50	0.51	3.4	< 0.50	65	1.7	59	15	1.9	11	0.61	1.5	0.78	0.67	0.86	7.8	6	0.56	20	1.3	23	1.9	4.4	2	29
Iron (Total)	N	2430	mg/kg	100	5700	5400	5600	11000	58000	30000	26000	13000	26000	20000	70000	24000	6500	5400	5500	17000	9800	26000	26000	< 100	8800	3500	8200	2200	4800	3900	6000
Arsenic	M	2450	mg/kg	1	2.4	3.2	4.2	6.1	16	4.9	18	6.3	49	41	13	43	2.4	2.6	1.9	1.4	18	35	19	< 0.5	1.3	2.7	1.2	2	< 0.5	2.3	1.5
Cadmium	M	2450	mg/kg	0.1	< 0.10	0.1	0.28	0.19	0.91	0.57	0.37	0.28	0.31	0.16	0.84	0.69	0.31	0.34	0.14	0.59	0.26	0.4	0.36	< 0.10	0.38	0.25	0.24	< 0.10	< 0.10	0.16	0.55
Chromium	M	2450	mg/kg	1	8.6	8.9	13	13	72	22	23	11	21	17	160	110	24	15	13	160	32	110	130	0.5	8.7	8.7	7.8	4.3	2.8	5.2	7.5
Manganese	M	2450	mg/kg	5	3400	1000	410	1400	2400	840	690	810	490	360	9700	12000	2400	2100	2200	6700	2200	11000	6400	1700	680	1300	840	450	530	750	1100
Copper	M	2450	mg/kg	0.5	4.6	8.6	7	14	27	12	60	11	94	37	35	95	7.1	12	7.1	9.3	12	95	67	0.93	4.8	10	6.3	6.7	1.6	6.9	5.4
Mercury	M	2450	mg/kg	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.08	< 0.05	0.59	0.05	0.42	0.17	0.25	0.66	< 0.05	< 0.05	< 0.05	< 0.05	0.07	0.85	0.89	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2450	mg/kg	0.5	2.6	4.8	5.4	13	39	13	37	9.2	43	25	28	46	3.1	5.8	3.3	3.2	7.3	47	34	1.2	6.9	4.7	7.2	4.1	0.88	4.4	3.6
Lead	M	2450	mg/kg	0.5	5.6	19.0	21	27	64	19	85	160	100	33	170	140	43	45	16	25	30	140	310	2.5	18	19	24	8.8	2.2	6.3	37
Selenium	M	2450	mg/kg	0.2	3.2	1.5	0.61	1.8	2.4	0.81	2.7	0.88	6.3	3.1	2.6	< 0.20	1	0.66	1.3	0.31	1.2	0.28	0.33	0.76	< 0.25	0.72	0.26	< 0.25	< 0.25	0.41	0.56
Vanadium	U	2450	mg/kg	5	30.0	17.0	13	19	88	19	38	17	47	43	160	140	29	26	20	110	80	120	100	< 0.5	27	18	9.5	8.1	6	11	14
Zinc	M	2450	mg/kg	0.5	16.0	37.0	24	25	170	39	130	48	140	55	370	200	110	90	41	91	59	160	160	4.9	24	26	23	18	3.9	13	38
Organic Matter	M	2625	%	0.4	3.0	9.8	15	8.5	5	10	14	6.2	36	7.4	7.6	24	3.8	15	3.3	1.7	8.1	59	64	6.7	2.1	8.1	4.1	3.6	5	9	3.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	< 1.0	< 1.0	3.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	2.3	< 2.0	< 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
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	< 1.0	< 1.0	20	11	3.1	2.8	3.3	4.3	6.4	5.7	5.2	< 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
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	< 1.0	< 1.0	26	9.3	< 2.0	2.6	< 2.0	48	4.8	4.8	9.9	< 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
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	< 1.0	< 1.0	43	5.5	< 3.0	38	< 3.0	180	7.9	4.4	66	< 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
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0	7.8	< 1.0	< 1.0	5.1	< 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	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	92	28	7.9	45	6.9	240	21	17	83	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 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	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C7-C8	N	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1	< 1.0	< 1.0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 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
Aromatic TPH >C10-C12	M	2680	mg/kg	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	< 1.0	< 1.0	< 1.0	< 1.0	21	< 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	< 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
Aromatic TPH >C16-C21	U	2680	mg/kg	1	< 1.0	< 1.0	2.3	< 2.0	< 2.0	< 2.0	< 2.0	5.8	2.1	2.1	8.1	< 1.0	< 1.0	< 1.0	< 1.0	5.1	< 1.0	36	< 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	< 1.0	< 1.0	< 2.0	< 2.0	2.4	< 2.0	< 2.0	7.5	7.7	< 2.0	7.4	< 1.0	< 1.0	< 1.0	< 1.0	44	< 1.0	88	< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8	< 1.0	< 1.0	1.7	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	14	10	< 5.0	17	< 5.0	< 5.0	< 5.0	< 5.0	49	< 5.0	150	< 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	< 10	< 10	96	30	12	48	< 10	250	32	20	100	< 10	< 10	< 10	< 10	49	< 10	150	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	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	< 1.0	< 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
Toluene	M	2760	µg/kg	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	< 1.0	< 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
Ethylbenzene	M	2760	µg/kg	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	< 1.0	< 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
m & p-Xylene	M	2760	µg/kg	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	< 1.0	< 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
o-Xylene	M	2760	µg/kg	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	< 1.0	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	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	< 1.0	< 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
Naphthalene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	< 0.10	0.31	< 0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	1.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	0.47	< 0.10	< 0.10	0.66	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45	< 0.10	< 0.10	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.44	< 0.10	< 0.10	< 0.10	< 0.10	0.34	< 0.10	< 0.10	0.32	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	0.45	< 0.10	3.4	0.71	0.41	0.62	0.6	3	0.47	2.5	4.1	0.29	< 0.10	0.52	0.61	< 0.10	0.51	0.32	0.42
Anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.69	0.22	0.12	0.13	0.13	1.1	< 0.10	1	0.91	< 0.10	< 0.10	0.33	0.24	< 0.10	0.15	0.12	< 0.10
Fluoranthene	M	2800	mg/kg	0.1	0.3	0.2	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10	0.47	< 0.10	5.6	1.1	0.32	0.87	0.6	8	0.58	4.1	6.4	0.74	< 0.10	0.94	0.53	< 0.10	0.81	0.32	0.29
Pyrene	M	2800	mg/kg	0.1	0.2	0.2	< 0.10	< 0.10	< 0.10	< 0.10	0.2	< 0.10	0.43	< 0.10	4.2	1	0.31	0.8	0.59	7.3	0.6	3.2	4.5	0.67	< 0.10	0.77	0.48	< 0.10	0.63	0.28	0.25
Benzo[a]anthracene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	2.2	0.74	< 0.10	0.41	0.26	5.4	0.37	2.2	3.2	0.44	< 0.10	0.61	0.45	< 0.10	0.32	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.21	< 0.10	1.9	0.7	< 0.10	0.3	0.35	6.3	0.49	2.5	3.4	0.35	< 0.10	0.46	0.4	< 0.10	0.45	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.1	1.7	< 0.10	0.73	0.3	9	0.42	4.1	5.2	0.28	< 0.10	0.87	0.5	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	0.49	< 0.10	0.34	0.17	4	0.25	1.1	1.4	0.36	< 0.10	0.33	0.38	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.2	0.85	< 0.10	0.28	0.35	8.2	0.42	2.8	2.8	0.2	< 0.10	0.43	0.31	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.9	0.72	< 0.10	< 0.10	< 0.10	5.3	< 0.10	2.9	2.8	< 0.10	< 0.10	0.43	0.48	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.22	< 0.10	< 0.10	< 0.10	0.74	< 0.10	0.43	1.1	< 0.10	< 0.10	0.32	0.31	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.1	0.91	< 0.10	< 0.10	< 0.10	5.2	< 0.10	1.9	2.5	< 0.10	< 0.10	0.68	0.41	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.2	< 2.0	33	9.4	< 2.0	4.5	3.4	65	3.6	29	41	3.3	< 2.0	6.7	5.1	< 2.0	2.9	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 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					Job No.:	210130-32	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156	210130-32	210115-27	210115-27	210130-32	210130-32	Number of Samples	Number of Exceedances	Minimum Value	Minimum Exceedance	Maximum Value	Average Value
					Sample ID.:																			
					Client Sample Ref.:	AL32-1	AW26-1	AV28-1	AV28-2	AV28-3	AV29-1	AV29-2	AW29-1	AW29-2	AK33-1	AM33-1	AM33-2	AK34-1	AK34-2						
					Sample Type:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID						
					Top Depth (m):	0.50-0.50	0.50-0.50	0.30-0.30	1.20-1.20	2.20-2.20	0.80-0.80	1.70-1.70	0.60-0.60	1.30-1.30	0.20-0.20	0.30-0.30	1.30-1.30	0.80-0.80	1.60-1.60						
					Bottom Depth (m):																			
					Date Sampled:	1/28/2021	12/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	1/29/2021	13/01/2021	13/01/2021	1/29/2021	1/29/2021						
					Asbestos Lab:																			
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		Detected		Not Detected	Not Detected			Not Detected	83	4	0.001	0.063	0.063	0.021
Asbestos by Gravimetry	U	2192	%	0.001								<0.001												
Total Asbestos	U	2192	%	0.001																				
Moisture	N	2030	%	0.020	9.4	13	9.8	19	21	15	12	12	18	12	8.3	8.6	11	13						
Soil Colour	N	2040		N/A	Black	Dark Brown	Dark Brown	Black	Black	Dark Brown	Black	Black	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown						
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Vegetation	Stones	Stones	None	Vegetation						
Soil Texture	N	2040		N/A																				
pH	M	2010		4.0	11.3	9.52	9.4	11.5	11.3	11.3	8.31	9.1	11.2	10.2	12.6	11.8	9.51	10.2						
Cyanide (Total)	M	2300	mg/kg	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1						
Ammoniacal Nitrogen	M	2425	mg/kg	0.5	<12	<12	<12	<12	<12	<12	127	<12	<12	<12	<12	<12	<12	<12						
Iron (Total)	N	2430	mg/kg	100	138000	64300	208000	143000	146000	321000	14800	222000	291000	134000	180000	65800	-	101000						
Arsenic	M	2450	mg/kg	1	8.28	11	7.62	9.8	11.7	17.2	4.66	15.6	17.3	9.69	7.22	9.12	13.6	15.9	148	7	0.50	41.00	280.00	13.78
Cadmium	M	2450	mg/kg	0.1	1.87	<0.2	0.802	<0.2	<0.2	4.82	0.297	1.18	3.89	1.6	<0.2	0.258	1.49	1.34	148	0	0.10	0.00	5.40	0.57
Chromium	M	2450	mg/kg	1	160	399	219	<9	<9	<9	<9	<9	65.1	75	628	121	119	33.8	148	0	0.50	0.00	700.00	62.04
Manganese	M	2450	mg/kg	5	12900	18900	8970	4270	4290	10900	2880	6090	12000	8420	209000	5090	8330	6690						
Copper	M	2450	mg/kg	0.5	20.4	40.3	19.1	19.6	17.8	43.9	14.3	25.7	34.1	22.4	14.5	23.8	23.3	20.2	148	0	0.93	0.00	200.00	24.70
Mercury	M	2450	mg/kg	0.1	<1	<1.4	<1.4	<1.4	<1.4	<1.4	<0.14	<1.4	<1.4	<1	<1.4	<1.4	<1	<1	148	0	0.05	0.00	8.70	0.31
Nickel	M	2450	mg/kg	0.5	34.6	26.4	29.5	20.7	21.3	41.6	7.14	29.7	32.9	45.9	24.6	45.1	26.5	27.2	148	1	0.88	270.00	270.00	19.45
Lead	M	2450	mg/kg	0.5	37.6	49.9	29.1	51.4	74	1400	31.7	242	1100	72	22.5	23.5	67.5	44.3	148	5	2.20	242.00	1400.00	75.80
Selenium	M	2450	mg/kg	0.2	<10	16.7	<10	<10	<10	<10	6.48	<10	<10	<10	22.7	<10	<10	<10	148	0	0.20	0.00	22.70	2.16
Vanadium	U	2450	mg/kg	5	157	622	146	64.6	69	156	22.1	78.6	168	139	571	96	134	53.6	148	3	0.50	571.00	660.00	71.00
Zinc	M	2450	mg/kg	0.5	98.7	205	180	128	170	2780	83	718	2990	212	63.9	86.6	196	120	148	1	3.90	5700.00	5700.00	195.41
Organic Matter	M	2625	%	0.4	18.1	4.34	26	49.1	44	11.5	1.45	24.7	19.7	9.43	1.19	10.3	10.1	4.14						
Aliphatic TPH >C5-C6	N	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0136	<0.01	<0.01	0.0182	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	148	0	0.01	0.00	1.00	0.85
Aliphatic TPH >C6-C8	N	2680	mg/kg	1	<0.01	<0.01	<0.01	0.036	<0.01	<0.01	0.041	<0.01	<0.01	<0.01	<0.01	0.0164	<0.01	<0.01	148	0	0.01	0.00	9.90	0.91
Aliphatic TPH >C8-C10	M	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0372	<0.01	<0.01	0.0855	<0.01	<0.01	<0.01	<0.01	0.0164	<0.01	<0.01	148	2	0.01	84.00	330.00	3.63
Aliphatic TPH >C10-C12	M	2680	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	2	1.00	400.00	1300.00	14.07
Aliphatic TPH >C12-C16	M	2680	mg/kg	1	<1	<1	<1	2.05	1.17	<1	4.07	<1	<1	<1	1.26	<1	<1	<1	148	2	1.00	1600.00	4900.00	56.61
Aliphatic TPH >C16-C21	M	2680	mg/kg	1	4.38	5.28	1.79	6.72	6.34	20.5	6.36	6.38	10	<1	9.88	3.97	1.1	<1	148	0	1.00	0.00	5200.00	65.23
Aliphatic TPH >C21-C35	M	2680	mg/kg	1	18.7	18.9	8.62	12.4	10.8	38	17	10.8	33	8.24	62.7	8.72	8.1	6.57	148	0	1.00	0.00	6800.00	153.58
Aliphatic TPH >C35-C44	N	2680	mg/kg	1	<1	4.98	<1	2.22	1.3	1.09	6.1	<1	1.51	<1	16.4	1.08	<1	<1	148	0	1.00	0.00	630.00	7.03
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5	24.3	30.1	11.3	23.4	19.6	60.4	33.5	18.5	44.8	9.5	90.2	14	9.88	8						
Aromatic TPH >C5-C7	N	2680	mg/kg	1	<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	148	0	0.01	0.00	1.00	0.85
Aromatic TPH >C7-C8	N	2680	mg/kg	1	<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	148	0	0.01	0.00	1.00	0.85
Aromatic TPH >C8-C10	M	2680	mg/kg	1	<0.01	<0.01	<0.01	0.0248	<0.01	<0.01	0.057	<0.01	<0.01	<0.01	<0.01	<0.01	0.0109	<0.01	148	1	0.01	240.00	240.00	2.66
Aromatic TPH >C10-C12	M	2680	mg/kg	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	2	1.00	150.00	710.00	6.93
Aromatic TPH >C12-C16	M	2680	mg/kg	1	<1	<1	<1	1.64	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	148	2	1.00	840.00	3200.00	29.78
Aromatic TPH >C16-C21	U	2680	mg/kg	1	<1	<1	1.89	3.73	2.72	2.14	<1	<1	1.72	1.35	<1	7.12	<1	<1	148	2	1.00	780.00	3100.00	29.30
Aromatic TPH >C21-C35	M	2680	mg/kg	1	43.5	22.6	15.2	12.3	10.5	5.16	4.64	25.9	8.78	9.84	13.6	25.8	10.3	7.01	148	2	1.00	2600.00	4400.00	76.22
Aromatic TPH >C35-C44	M	2680	mg/kg	1	1	2.6	2.63	<1	<1	<1	<1	2.71	<1	<1	<1	5.02	1.07	<1	148	1	1.00	2000.00	2000.00	15.24
Total Aromatic Hydrocarbons	N	2680	mg/kg	5	45.2	25.7	19.8	18.7	15.1	8.8	6.04	29	11.6	12.3	15.5	38.3	11.8	8.07						
Total Petroleum Hydrocarbons	N	2680	mg/kg	10	69.5	55.8	31.1	42.2	34.7	69.2	39.7	47.5	56.3	21.8	106	52.3	21.6	16.1						
Benzene	M	2760	µg/kg	1	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	148	14	1.00	180.00	180.00	18.19
Toluene	M	2760	µg/kg	1	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	148	0	1.00	0.00	140.00	14.27
Ethylbenzene	M	2760	µg/kg	1	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	148	0	1.00	0.00	80.00	8.50
m & p-Xylene	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	148	0	1.00	0.00	200.00	20.04
o-Xylene	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	148	0	1.00	0.00	200.00	20.09
Methyl Tert-Butyl Ether	M	2760	µg/kg	1	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200						
Naphthalene	M	2800	mg/kg	0.1	0.0447	0.0251	0.0488	0.102	0.0549	0.0383	0.0112	0.0135	0.0477	0.0421	0.0185	0.123	0.0599	0.023	148	0	0.01	0.00	5.00	0.28
Acenaphthylene	N	2800	mg/kg	0.1	0.0383	<0.012	0.0258	0.0172	<0.012	<0.012	<0.012	<0.012	<0.012	0.0315	<0.012	0.224	0.0461	<0.012	148	0	0.01	0.00	7.80	0.25
Acenaphthene	M	2800	mg/kg	0.1	<0.008	<0.008	0.00957	0.0564	0.0112	<0.008	<0.008	<0.008	0.0179	<0.008	0.015	0.0133	<0.008	<0.008	148	0	0.01	0.00	25.00	0.27
Fluorene	M	2800	mg/kg	0.1	0.0116	<0.01	0.0208	0.211	0.0274	0.012	<0.01	<0.01	0.0292	<0.01	<0.01	0.125	<0.01	<0.01	148	0	0.01	0.00	13.00	0.21
Phenanthrene	M	2800	mg/kg	0.1	0.137	0.0722	0.293	0.442	0.183	0.113	0.0287	0.046	0.182	0.0923	0.133	0.972	0.12	0.0428	148	1	0.03	110.00	110.00	1.68
Anthracene	M	2800	mg/kg	0.1	0.0436	<0.016	0.0733	0.0792	0.0379	<0.016	<0.016	<0.016	0.049	0.0276	0.0233	0.54	0.0336	<0.016	148	0	0.02	0.00	21.00	0.48
Fluoranthene	M	2800	mg/kg	0.1	0.354	0.122	0.417	0.347	0.268	0.0829	0.0285	0.0414	0.294	0.193	0.273	2.53	0.301	0.0891	148	0	0.03	0.00	68.00	2.37
Pyrene	M	2800	mg/kg	0.1	0.276	0.117	0.324	0.312	0.232	0.0728	0.0246	0.0371	0.293	0.143	0.204	1.75	0.259	0.0737	148	0	0.02	0.00	51.00	1.98
Benzo[a]anthracene	M	2800	mg/kg	0.1	0.243	0.0723	0.228	0.26	0.2	0.0221	0.0165	0.026	0.125	0.104	0.131	1.27	0.184	0.055	148	7	0.02	7.30	20.00	1.21
Chrysene	M	2800	mg/kg	0.1	0.21	0.0778	0.245	0.258	0.219	0.0251	0.016	0.0346	0.136	0.101	0.179	1.37	0.157	0.0606	148	2	0.02	18.00	21.00	1.29
Benzo[b]fluoranthene	M	2800	mg/kg	0.1	0.426	0.119	0.226	0.383	0.316	0.0191	0.028	0.0582	0.196	0.186	0.319	1.62	0.388	0.104	148	27	0.02	3.00	33.00	2.03
Benzo[k]fluoranthene	M	2800	mg/kg	0.1	0.13	0.0357	0.0922	0.14	0.102	<0.014	<0.014	0.0171	0.0509	0.0615	0.0979	0.537	0.104	0.0295	148	0	0.01	0.00	11.00	0.71
Benzo[a]pyrene	M	2800	mg/kg	0.1	0.271	0.0639	0.182	0.311	0.215	<0.015	<0.015	0.0259	0.106	0.111	0.128	0.986	0.195	0.0567	148	26	0.02	2.30	26.00	1.54
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.1	0.269	0.0549	0.134	0.203	0.137	<0.018	<0.018	0.022	0.0935	0.128	0.167	0.813	0.221	0.0622	148	0	0.02	0.00	23.00	1.19
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.1	0.0476	<0.023	0.0385	0.0575	0.0426	<0.023	<0.023	<0.023	<0.023	<0.023	0.0337	0.172	0.0344	<0.023	148	27	0.02	0.25	3.90	0.26
Benzo[g,h,i]perylene	M	2800	mg/kg	0.1	0.231	0.0575	0.139	0.209	0.145	<0.024	<0.024	<0.024	0.0793	0.113	0.147	0.723	0.169	0.0502	148	0	0.02	0.00	22.00	1.08
Total Of 16 PAH's	N	2800	mg/kg	2	2.73	0.818	2.5	3.39	2.19	0.385	0.153	0.322	1.7	1.33	1.87	13.8	2.27	0.647						
Resorcinol	M	2920	mg/kg	0.02																				
Phenol	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	148	0	0.01	0.00	0.88	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						
Xylenols	M	2920	mg/kg	0.02	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015						
1-Naphthol	N	2920	mg/kg	0.02																				
Trimethylphenols	M	2920	mg/kg	0.02																				
Total Phenols	M	2920	mg/kg	0.1	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035						

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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	**Date Received:**	06-Jun-2022
Order No.:	PO115623	**Date Instructed:**	06-Jun-2022
No. of Samples:	8		
Turnaround (Wkdays):	5	**Results Due:**	10-Jun-2022
Date Approved:	10-Jun-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

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

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

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Final Report

Report No.:	22-20755-1
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):	Chris Wilson David McCarroll Caitlin Davies
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.:**			22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441683	1441684	1441685	1441686	1441687	1441688	1441689	1441690	1441691
		Client Sample ID.:			AP37-1	AP35-2	AP35-1	AP37-2	AP36-2	AP36-1	AS36-2	AU36-2	AU35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	1.20	0.50	1.80	1.50	0.70	1.80	1.30	1.50
		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	3.2	32	11	11	27	6.9	9.1	15	14
Soil Colour	N	2040		N/A	Brown	Black	Grey	Brown	Black	Brown	Grey	Brown	Brown
Other Material	N	2040		N/A	Stones	None	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	9.7	8.6	11.3	10.9	8.3	9.0	> 12.0	11.6	12.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.5	14	45
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.3	1.6	5.2	0.70	6.9	12	1.4	2.0	1.2
Iron (Total)	N	2430	mg/kg	100	19000	16000	13000	14000	15000	17000	15000	21000	20000
Arsenic	M	2455	mg/kg	0.5	6.4	34	8.3	8.9	28	8.1	4.4	12	5.7
Cadmium	M	2455	mg/kg	0.10	0.56	1.2	0.60	0.23	0.97	0.75	0.61	0.36	0.61
Chromium	M	2455	mg/kg	0.5	22	19	34	23	17	22	55	57	74
Manganese	M	2455	mg/kg	1.0	1600	430	1600	2200	400	1300	2900	3700	3500
Copper	M	2455	mg/kg	0.50	14	62	47	38	48	21	27	29	21
Mercury	M	2455	mg/kg	0.05	0.09	0.22	0.12	0.09	0.27	0.09	0.12	0.06	1.4
Nickel	M	2455	mg/kg	0.50	12	31	15	12	29	14	10	23	12
Lead	M	2455	mg/kg	0.50	51	58	77	190	47	99	51	56	33
Selenium	M	2455	mg/kg	0.25	0.36	2.9	0.76	3.4	2.7	0.88	0.49	1.1	0.72
Vanadium	U	2455	mg/kg	0.5	27	40	66	46	36	26	61	55	64
Zinc	M	2455	mg/kg	0.50	140	130	270	87	70	180	170	150	290
Organic Matter	M	2625	%	0.40	8.3	31	9.5	8.8	22	9.0	8.8	7.4	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	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.4	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	30	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	24	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	18	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	830	< 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	1100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	51	< 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.:**			22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755	22-20755
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441683	1441684	1441685	1441686	1441687	1441688	1441689	1441690	1441691
		Client Sample ID.:			AP37-1	AP35-2	AP35-1	AP37-2	AP36-2	AP36-1	AS36-2	AU36-2	AU35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	1.20	0.50	1.80	1.50	0.70	1.80	1.30	1.50
		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	180	< 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	180	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	1300	< 10	< 10	< 10	< 10	< 10	51	< 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	0.34	0.23	0.60	0.63	0.19	1.5	0.28	0.24	0.44
Anthracene	M	2800	mg/kg	0.10	0.24	< 0.10	0.14	0.16	0.10	0.81	< 0.10	< 0.10	0.17
Fluoranthene	M	2800	mg/kg	0.10	0.73	0.11	0.87	0.88	0.12	4.6	0.84	0.42	1.1
Pyrene	M	2800	mg/kg	0.10	0.70	0.14	0.82	0.67	0.12	3.9	0.70	0.53	1.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.48	< 0.10	0.40	0.28	< 0.10	2.3	0.46	0.29	1.1
Chrysene	M	2800	mg/kg	0.10	0.59	< 0.10	0.40	0.37	< 0.10	2.1	0.46	0.35	1.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.1	< 0.10	0.35	0.49	< 0.10	3.1	0.69	0.58	2.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.36	< 0.10	0.13	0.22	< 0.10	1.2	0.29	0.21	0.68
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.71	< 0.10	0.40	0.42	< 0.10	2.7	0.44	0.36	1.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.80	< 0.10	0.28	0.42	< 0.10	1.9	0.44	0.64	1.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.21	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.15	0.34	0.45
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.72	< 0.10	0.26	0.15	< 0.10	1.6	0.35	0.27	1.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	7.0	< 2.0	4.7	4.7	< 2.0	26	5.1	4.2	13
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
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	22-20758-1
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.:**			22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441700	1441701	1441702	1441703	1441704	1441705	1441706	1441707
		Client Sample ID.:			AQ36-2	AQ34-1	AO37-1	AO37-2	AN36-2	AN36-1	AQ34-2	AQ36-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			2	0.5	0.3	1.8	2	0.5	1.5	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:			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	17	1.7	2.8	7.8	9.1	5.0	7.7	4.8
Soil Colour	N	2040		N/A	Brown	Brown	Grey	Brown	Brown	Grey	Brown	Grey
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.9	11.4	9.7	10.9	9.0	10.7	> 12.0	11.4
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	15	0.86	1.0	3.3	18	1.1	0.93	< 0.50
Iron (Total)	N	2430	mg/kg	100	19000	8100	14000	13000	25000	12000	13000	14000
Arsenic	M	2455	mg/kg	0.5	18	2.4	5.3	5.7	19	5.3	26	4.2
Cadmium	M	2455	mg/kg	0.10	0.18	0.16	0.25	0.12	0.13	0.17	1.5	0.48
Chromium	M	2455	mg/kg	0.5	15	6.1	12	27	13	23	17	66
Manganese	M	2455	mg/kg	1.0	350	250	3900	1400	990	910	2400	3000
Copper	M	2455	mg/kg	0.50	42	4.8	6.9	15	33	5.4	13	11
Mercury	M	2455	mg/kg	0.05	0.49	0.07	0.05	< 0.05	0.05	< 0.05	0.09	0.06
Nickel	M	2455	mg/kg	0.50	19	3.2	7.8	14	37	7.7	9.6	33
Lead	M	2455	mg/kg	0.50	80	29	26	24	27	17	62	50
Selenium	M	2455	mg/kg	0.25	1.3	< 0.25	< 0.25	1.4	1.2	< 0.25	0.39	0.25
Vanadium	U	2455	mg/kg	0.5	22	6.8	12	52	25	24	24	58
Zinc	M	2455	mg/kg	0.50	70	61	42	42	61	33	140	85
Organic Matter	M	2625	%	0.40	31	4.7	1.0	2.4	5.5	6.0	7.4	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	< 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
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.:**		22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758	22-20758
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1441700	1441701	1441702	1441703	1441704	1441705	1441706	1441707
			Client Sample ID.:		AQ36-2	AQ34-1	AO37-1	AO37-2	AN36-2	AN36-1	AQ34-2	AQ36-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		2	0.5	0.3	1.8	2	0.5	1.5	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:		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
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	< 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
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	< 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
Acenaphthene	M	2800	mg/kg	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
Phenanthrene	M	2800	mg/kg	0.10	1.2	0.14	0.18	0.48	< 0.10	0.27	0.54	0.46
Anthracene	M	2800	mg/kg	0.10	0.25	< 0.10	< 0.10	0.12	< 0.10	< 0.10	0.12	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	1.6	0.10	0.25	0.53	< 0.10	0.40	0.63	0.65
Pyrene	M	2800	mg/kg	0.10	1.2	0.10	0.23	0.33	< 0.10	0.31	0.51	0.57
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.63	< 0.10	0.13	0.23	< 0.10	0.11	0.29	0.31
Chrysene	M	2800	mg/kg	0.10	0.69	< 0.10	0.17	0.23	< 0.10	0.15	0.29	0.38
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.99	< 0.10	< 0.10	0.34	< 0.10	0.20	0.55	0.64
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.36	< 0.10	< 0.10	0.13	< 0.10	0.10	0.16	0.20
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.65	< 0.10	< 0.10	0.24	< 0.10	0.13	0.31	0.38
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	0.35
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10	0.11
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26	0.38
Total Of 16 PAH's	N	2800	mg/kg	2.0	8.6	< 2.0	< 2.0	2.6	< 2.0	< 2.0	4.0	4.4
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
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-20761-3		
Initial Date of Issue:	15-Jun-2022	**Date of Re-Issue:**	27-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.:		**Date Received:**	06-Jun-2022
Order No.:	PO115623	**Date Instructed:**	06-Jun-2022
No. of Samples:	8		
Turnaround (Wkdays):	17	**Results Due:**	28-Jun-2022
Date Approved:	27-Jun-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761
Quotation No.:		**Chemtest Sample ID.:**			1441718	1441719	1441720	1441721	1441722	1441723	1441725
		Client Sample ID.:			AT34-1	AO36-1	AN35-1	AP34-1	AO36-2	AP34-5	AT35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.70	0.50	0.30	0.60	1.80	1.90	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
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type	U	2192		N/A	-		-		bitumen	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		Chrysotile	No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001					0.063		
Total Asbestos	U	2192	%	0.001					0.063		
Moisture	N	2030	%	0.020	8.9	7.3	11	7.7	8.4	12	16
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	10.8	> 12.0	11.6	11.4	10.2	10.5	11.2
Cyanide (Total)	M	2300	mg/kg	0.50	1.6	< 0.50	< 0.50	0.70	< 0.50	< 0.50	0.80
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.93	0.58	0.86	2.6	2.0	1.3	0.58
Iron (Total)	N	2430	mg/kg	100	8700	10000	18000	9600	21000	11000	30000
Arsenic	M	2455	mg/kg	0.5	3.8	14	7.3	5.7	12	5.6	3.0
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.19	0.41	0.14	0.17	< 0.10	0.82
Chromium	M	2455	mg/kg	0.5	24	8.4	76	25	17	27	76
Manganese	M	2455	mg/kg	1.0	2000	330	2800	2100	660	3500	3400
Copper	M	2455	mg/kg	0.50	10	6.5	17	12	18	16	17
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	0.07	< 0.05	0.06	< 0.05	0.13
Nickel	M	2455	mg/kg	0.50	7.9	4.8	12	5.2	14	4.7	8.6
Lead	M	2455	mg/kg	0.50	19	19	27	20	25	16	51
Selenium	M	2455	mg/kg	0.25	1.4	< 0.25	1.7	3.6	0.70	3.7	0.67
Vanadium	U	2455	mg/kg	0.5	38	10	67	49	21	74	64
Zinc	M	2455	mg/kg	0.50	26	30	39	42	43	33	150
Organic Matter	M	2625	%	0.40	4.8	12	12	2.9	13	3.5	7.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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	< 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	< 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
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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20761	22-20761	22-20761	22-20761	22-20761	22-20761	22-20761
Quotation No.:		**Chemtest Sample ID.:**			1441718	1441719	1441720	1441721	1441722	1441723	1441725
		Client Sample ID.:			AT34-1	AO36-1	AN35-1	AP34-1	AO36-2	AP34-5	AT35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.70	0.50	0.30	0.60	1.80	1.90	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
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY	COVENTRY	
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
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	< 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
Total Aromatic Hydrocarbons	N	2680	mg/kg	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	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	2.4	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	2.3	1.8	< 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	4.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	2.0	< 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	< 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
Acenaphthene	M	2800	mg/kg	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
Phenanthrene	M	2800	mg/kg	0.10	0.22	1.5	0.56	0.21	0.74	0.27	1.2
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.69	0.13	< 0.10	0.21	< 0.10	0.21
Fluoranthene	M	2800	mg/kg	0.10	0.38	3.9	0.77	0.27	0.86	0.39	3.2
Pyrene	M	2800	mg/kg	0.10	0.35	2.7	0.66	0.30	0.69	0.31	3.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.24	1.7	0.39	0.13	0.36	0.16	2.1
Chrysene	M	2800	mg/kg	0.10	0.26	1.8	0.53	0.13	0.40	0.15	2.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.48	2.3	0.68	< 0.10	0.45	0.23	3.8
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.19	0.77	0.23	< 0.10	0.17	0.11	1.4
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.23	1.6	0.46	< 0.10	0.28	0.20	2.8
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.23	1.2	0.32	< 0.10	0.15	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	0.19	0.13	< 0.10	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.30	1.2	0.40	< 0.10	0.21	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	3.0	20	5.3	< 2.0	4.6	< 2.0	20
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

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	7.7
Electrical Conductivity	U	1020	µS/cm	1.0	700
Suspended Solids At 105C	U	1030	mg/l	5.0	27
Total Dissolved Solids	N	1020	mg/l	1.0	460
Turbidity	N	1060	NTU	1.0	10
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	[B] 22
Dissolved Oxygen	N	1150	mg O2/l	0.50	6.7
Redox Potential	N	1170	mV	N/A	83
Chloride	U	1220	mg/l	1.0	67
Fluoride	U	1220	mg/l	0.050	0.48
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.11
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	43
Sulphate	U	1220	mg/l	1.0	130
Cyanide (Total)	U	1300	mg/l	0.050	1.1
Cyanide (Free)	U	1300	mg/l	0.050	0.14
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	0.98
Sulphide	U	1325	mg/l	0.050	[B] < 0.050
Calcium	U	1455	mg/l	2.00	51
Magnesium	U	1455	mg/l	0.20	10
Total Calcium	N	1455	mg/l	5.0	54
Total Magnesium	N	1455	mg/l	0.50	10
Total Hardness as CaCO3	U	1270	mg/l	15	170
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.7
Boron (Dissolved)	U	1455	µg/l	10.0	140
Barium (Dissolved)	U	1455	µg/l	5.00	54
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	2.6
Copper (Dissolved)	U	1455	µg/l	0.50	2.5
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	1.5
Nickel (Dissolved)	U	1455	µg/l	0.50	1.8
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.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	0.86
Vanadium (Dissolved)	U	1455	µg/l	0.50	8.1
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5
Arsenic (Total)	N	1455	µg/l	0.20	2.9
Boron (Total)	N	1455	µg/l	10.0	140
Barium (Total)	N	1455	µg/l	5.00	52
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	7.7
Copper (Total)	N	1455	µg/l	0.50	3.1
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	1.5
Nickel (Total)	N	1455	µg/l	0.50	1.8
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	1.5
Vanadium (Total)	N	1455	µg/l	0.50	7.8
Zinc (Total)	N	1455	µg/l	2.5	< 2.5
Chromium (Hexavalent)	U	1490	µg/l	20	[B] < 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	6.8
Total Inorganic Carbon	N	1220	mg/l	2.5	24
Total Organic Carbon	U	1610	mg/l	2.0	6.9
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.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-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	< 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.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-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.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-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.:**		22-20761
Quotation No.:			**Chemtest Sample ID.:**		1441724
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		31-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

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:
1441724		D2-S		31-May-2022	B	Coloured Winchester 1000ml
1441724		D2-S		31-May-2022	B	EPA Vial 40ml
1441724		D2-S		31-May-2022	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.
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

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N	Unaccredited
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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

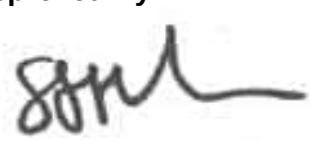
If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

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

Amended Report

Report No.:	22-20772-2		
Initial Date of Issue:	10-Jun-2022	**Date of Re-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	**Date Received:**	06-Jun-2022
Order No.:	PO115623	**Date Instructed:**	06-Jun-2022
No. of Samples:	6		
Turnaround (Wkdays):	11	**Results Due:**	20-Jun-2022
Date Approved:	14-Jun-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20772	22-20772	22-20772	22-20772	22-20772	22-20772
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441789	1441790	1441791	1441792	1441793	1441794
		Client Sample ID.:			AT36-2	AU37-1	AT37-2	AT36-1	AU37-2	AN35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.8	0.6	1.8	0.4	1.7	1
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	Fibres/Clumps		-		-	-
Asbestos Identification	U	2192		N/A	Chrysotile		No Asbestos Detected		No Asbestos Detected	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	12	9.8	13	6.6	11	13
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones and Roots	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	11.2	11.3	12.0	> 12.0	11.2
Cyanide (Total)	M	2300	mg/kg	0.50	0.60	2.5	0.70	8.7	3.3	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	1.7	1.6	1.5	1.3	1.6
Iron (Total)	N	2430	mg/kg	100	11000	22000	14000	22000	13000	21000
Arsenic	M	2455	mg/kg	0.5	6.2	6.5	5.4	6.8	8.1	12
Cadmium	M	2455	mg/kg	0.10	0.18	0.65	0.15	0.53	0.26	0.22
Chromium	M	2455	mg/kg	0.5	28	110	19	230	40	48
Manganese	M	2455	mg/kg	1.0	2100	5500	660	9500	1100	2000
Copper	M	2455	mg/kg	0.50	18	21	17	23	29	32
Mercury	M	2455	mg/kg	0.05	0.11	0.12	< 0.05	0.13	0.05	0.09
Nickel	M	2455	mg/kg	0.50	11	16	16	13	24	21
Lead	M	2455	mg/kg	0.50	27	60	14	60	29	51
Selenium	M	2455	mg/kg	0.25	2.6	1.0	0.82	0.47	0.84	1.2
Vanadium	U	2455	mg/kg	0.5	43	100	27	200	37	46
Zinc	M	2455	mg/kg	0.50	75	150	30	190	45	79
Organic Matter	M	2625	%	0.40	5.9	7.8	9.3	2.1	2.6	12
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.:**			22-20772	22-20772	22-20772	22-20772	22-20772	22-20772
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441789	1441790	1441791	1441792	1441793	1441794
		Client Sample ID.:			AT36-2	AU37-1	AT37-2	AT36-1	AU37-2	AN35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.8	0.6	1.8	0.4	1.7	1
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			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	< 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
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	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	1.9	6.3	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	2.0	< 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	< 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
Acenaphthene	M	2800	mg/kg	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
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	1.7	< 0.10	< 0.10	0.58	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	1.5	< 0.10	< 0.10	0.90	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	9.1	< 0.10	0.99	4.4	0.65
Pyrene	M	2800	mg/kg	0.10	< 0.10	9.3	< 0.10	1.1	3.5	0.78
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	7.6	< 0.10	1.0	3.0	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	9.6	< 0.10	1.0	4.4	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	17	< 0.10	1.8	5.7	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	5.9	< 0.10	0.49	1.8	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	14	< 0.10	1.5	4.0	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	12	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	1.4	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	12	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	100	< 2.0	7.9	28	< 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
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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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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.:	22-21373-1
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

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.:	22-21381-1
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:	8
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.:**			22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1444570	1444571	1444572	1444573	1444574	1444575	1444576	1444577
		Client Sample ID.:			AX33-1	AX33-2	AW33-1	AW33-2	AV33-1	AV33-2	AV33-3	AV33-4
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.80	1.60	0.90	1.80	0.60	3.00	2.20	0.10
		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	12	10	12	8.1	5.2	7.5	8.7	5.4
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 and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.6	9.8	9.1	9.5	9.3	10.3	9.7	8.9
Cyanide (Total)	M	2300	mg/kg	0.50	1.9	0.70	< 0.50	< 0.50	< 0.50	< 0.50	1.9	2.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	40	4.4	2.0	1.0	10	0.86	0.75	2.9
Iron (Total)	N	2430	mg/kg	100	18000	16000	26000	17000	28000	15000	30000	24000
Arsenic	M	2455	mg/kg	0.5	3.6	4.0	36	12	6.8	5.4	13	130
Cadmium	M	2455	mg/kg	0.10	0.51	1.7	0.36	0.23	0.30	0.26	0.43	1.1
Chromium	M	2455	mg/kg	0.5	28	38	46	16	14	33	21	47
Manganese	M	2455	mg/kg	1.0	1300	1100	7400	4200	2000	3100	2500	22000
Copper	M	2455	mg/kg	0.50	7.5	7.8	21	11	7.8	19	10	62
Mercury	M	2455	mg/kg	0.05	0.07	< 0.05	0.06	< 0.05	< 0.05	0.10	0.05	0.17
Nickel	M	2455	mg/kg	0.50	9.3	12	42	14	8.4	10	14	60
Lead	M	2455	mg/kg	0.50	61	98	25	15	75	33	36	40
Selenium	M	2455	mg/kg	0.25	0.95	1.0	0.75	1.1	0.64	1.4	0.69	1.1
Vanadium	U	2455	mg/kg	0.5	18	23	35	28	20	33	45	90
Zinc	M	2455	mg/kg	0.50	97	77	130	40	130	63	75	120
Organic Matter	M	2625	%	0.40	10	2.1	31	9.5	19	6.0	19	12
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	55	< 1.0	30	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	11	< 1.0	560	< 1.0	300	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	85	< 1.0	670	< 1.0	370	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	24	< 1.0	250	< 1.0	1800	120	1200	< 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	24	< 5.0	340	< 5.0	3100	120	1900	< 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	71	< 1.0	41	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381	22-21381
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1444570	1444571	1444572	1444573	1444574	1444575	1444576	1444577
			Client Sample ID.:		AX33-1	AX33-2	AW33-1	AW33-2	AV33-1	AV33-2	AV33-3	AV33-4
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.80	1.60	0.90	1.80	0.60	3.00	2.20	0.10
			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 >C16-C21	U	2680	mg/kg	1.0	7.3	< 1.0	< 1.0	< 1.0	91	< 1.0	33	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	190	< 1.0	780	< 1.0	120	< 1.0	73	< 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	200	< 5.0	780	< 5.0	280	< 5.0	150	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	230	< 10	1100	< 10	3400	120	2000	< 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	< 0.10	< 0.10	1.3	< 0.10	< 0.10	< 0.10	< 0.10	2.7
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	0.72
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.23
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.30	< 0.10	< 0.10	< 0.10	< 0.10	0.55
Phenanthrene	M	2800	mg/kg	0.10	1.6	0.25	2.2	0.45	0.23	< 0.10	0.86	2.8
Anthracene	M	2800	mg/kg	0.10	2.1	0.11	0.87	< 0.10	0.23	< 0.10	0.15	0.80
Fluoranthene	M	2800	mg/kg	0.10	12	0.50	3.0	0.47	1.0	0.23	0.68	5.0
Pyrene	M	2800	mg/kg	0.10	11	0.62	2.2	0.36	0.78	0.19	0.64	3.7
Benzo[a]anthracene	M	2800	mg/kg	0.10	8.1	0.36	1.4	0.20	< 0.10	< 0.10	0.30	2.9
Chrysene	M	2800	mg/kg	0.10	8.8	0.42	1.7	0.19	< 0.10	< 0.10	0.40	2.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	18	0.79	2.5	< 0.10	< 0.10	< 0.10	0.44	4.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	6.5	0.22	0.80	< 0.10	< 0.10	< 0.10	0.13	1.4
Benzo[a]pyrene	M	2800	mg/kg	0.10	15	0.53	1.4	< 0.10	< 0.10	< 0.10	0.35	3.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	16	0.71	1.2	< 0.10	< 0.10	< 0.10	0.21	2.7
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	2.2	0.11	0.18	< 0.10	< 0.10	< 0.10	< 0.10	0.65
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	13	0.57	1.2	< 0.10	< 0.10	< 0.10	0.22	2.4
Total Of 16 PAH's	N	2800	mg/kg	2.0	110	5.2	21	< 2.0	2.3	< 2.0	4.4	36
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.:	22-24801-1
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)
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.:	22-25621-1
Initial Date of Issue:	12-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:	1
Turnaround (Wkdays):	5
Date Approved:	12-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	07-Jul-2022
Date Instructed:	07-Jul-2022
Results Due:	13-Jul-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-25621
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1463371
			Client Sample ID.:		AW31-1
			Sample Type:		SOIL
			Top Depth (m):		0.2
			Bottom Depth (m):		0.2
			Date Sampled:		05-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	7.2
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	[B] 10.0
Cyanide (Total)	M	2300	mg/kg	0.50	[B] 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	[B] 30
Iron (Total)	N	2430	mg/kg	100	[B] 22000
Arsenic	M	2455	mg/kg	0.5	13
Cadmium	M	2455	mg/kg	0.10	0.23
Chromium	M	2455	mg/kg	0.5	47
Manganese	M	2455	mg/kg	1.0	4100
Copper	M	2455	mg/kg	0.50	16
Mercury	M	2455	mg/kg	0.05	0.05
Nickel	M	2455	mg/kg	0.50	17
Lead	M	2455	mg/kg	0.50	31
Selenium	M	2455	mg/kg	0.25	0.64
Vanadium	U	2455	mg/kg	0.5	45
Zinc	M	2455	mg/kg	0.50	90
Organic Matter	M	2625	%	0.40	[B] 50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-25621
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1463371
			Client Sample ID.:		AW31-1
			Sample Type:		SOIL
			Top Depth (m):		0.2
			Bottom Depth (m):		0.2
			Date Sampled:		05-Jun-2022
			Asbestos Lab:		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[B] < 10
Benzene	M	2760	µg/kg	1.0	[B] < 1.0
Toluene	M	2760	µg/kg	1.0	[B] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 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	1.2
Anthracene	M	2800	mg/kg	0.10	0.24
Fluoranthene	M	2800	mg/kg	0.10	1.6
Pyrene	M	2800	mg/kg	0.10	1.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.86
Chrysene	M	2800	mg/kg	0.10	0.96
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.60
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.98
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	9.3
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

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:
1463371		AW31-1		05-Jun-2022	B	Amber Glass 250ml
1463371		AW31-1		05-Jun-2022	B	Amber Glass 60ml
1463371		AW31-1		05-Jun-2022	B	Plastic Tub 1000g

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
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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

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.

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.:	22-29945-1
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
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
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Amended Report

Report No.:	22-32672-2		
Initial Date of Issue:	05-Sep-2022	**Date of Re-Issue:**	12-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:**	26-Aug-2022
Order No.:	PO115623	**Date Instructed:**	26-Aug-2022
No. of Samples:	17		
Turnaround (Wkdays):	11	**Results Due:**	12-Sep-2022
Date Approved:	12-Sep-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1494904	1494905	1494906	1494907	1494908	1494909	1494910	1494911	1494912
Order No.: PO115623		Client Sample Ref.:			A034-1	AN34-1	R16-1	S16-1	S18-1	R17-1	R17-2	S17-1	S17-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.50	1.00	1.20	0.50	1.00	0.50	2.50	0.60	1.30
		Date Sampled:			24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-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
Asbestos by Gravimetry	U	2192	%	0.001									
Total Asbestos	U	2192	%	0.001									
Moisture	N	2030	%	0.020	8.1	5.1	6.6	9.7	7.7	15	46	6.9	9.0
Soil Colour	N	2040		N/A	Grey	Grey	Black	Brown	Brown	Brown	Grey	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones and unknown	Stones and Roots	Stones	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.1	10.3	11.4	10.5	9.3	10.4	10.4	9.5	9.7
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	3.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	1.3	< 0.50	0.78	44	1.6	1.5	3.0	2.2
Iron (Total)	N	2430	mg/kg	100	5700	5400	43000	55000	16000	16000	11000	28000	32000
Arsenic	M	2455	mg/kg	0.5	2.4	3.2	2.4	14	6.4	6.3	4.8	8.4	4.6
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.10	0.14	0.31	0.17	< 0.10	< 0.10	0.32	0.25
Chromium	M	2455	mg/kg	0.5	8.6	8.9	140	21	17	17	17	20	30
Manganese	M	2455	mg/kg	1.0	3400	1000	6100	1600	790	820	600	1200	2100
Copper	M	2455	mg/kg	0.50	4.6	8.6	11	43	16	16	9.0	23	13
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	0.08	0.07	0.05	0.11	< 0.05	0.11	0.09
Nickel	M	2455	mg/kg	0.50	2.6	4.8	6.4	39	9.9	9.4	8.2	15	10
Lead	M	2455	mg/kg	0.50	5.6	19	22	40	24	37	12	50	36
Selenium	M	2455	mg/kg	0.25	3.2	1.5	0.52	0.45	0.53	0.48	0.40	0.76	0.59
Vanadium	U	2455	mg/kg	0.5	30	17	120	19	21	23	17	30	42
Zinc	M	2455	mg/kg	0.50	16	37	65	68	62	38	24	120	91
Organic Matter	M	2625	%	0.40	3.0	9.8	11	58	15	13	20	25	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	< 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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1494904	1494905	1494906	1494907	1494908	1494909	1494910	1494911	1494912
Order No.: PO115623		Client Sample Ref.:			A034-1	AN34-1	R16-1	S16-1	S18-1	R17-1	R17-2	S17-1	S17-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.50	1.00	1.20	0.50	1.00	0.50	2.50	0.60	1.30
		Date Sampled:			24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022
		Asbestos Lab:			DURHAM		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	< 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	9.0	4.3	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	27	26	< 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	36	30	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	36	30	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	9.9	< 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	4.9	< 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	2.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.25	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.30	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	3.5	2.3	2.0	0.58	< 0.10	1.2	0.70
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.56	0.45	0.47	0.13	< 0.10	0.23	0.20
Fluoranthene	M	2800	mg/kg	0.10	0.30	0.20	3.4	2.6	2.3	0.54	0.27	1.4	0.84
Pyrene	M	2800	mg/kg	0.10	0.19	0.24	2.6	1.9	1.5	0.44	0.21	1.0	0.68
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	1.8	1.3	1.1	0.36	< 0.10	0.78	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	2.1	1.3	0.88	0.33	< 0.10	0.70	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	2.5	1.8	1.4	< 0.10	< 0.10	1.0	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.79	0.45	0.43	< 0.10	< 0.10	0.26	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	1.9	1.4	1.2	< 0.10	< 0.10	0.75	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10	0.87	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.34	< 0.10	0.17	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10	0.78	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	26	14	13	2.4	< 2.0	7.3	2.4
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.:**			22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1494913	1494914	1494915	1494916	1494917	1494918	1494919	1494920
Order No.: PO115623		Client Sample Ref.:			T17-1	T17-2	S13-1	R13-1	R13-2	S12-1	R140-1	R140-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	2.00	1.10	0.70	2.20	1.00		
		Date Sampled:			24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022
		Asbestos Lab:				DURHAM	DURHAM	DURHAM		DURHAM	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		No Asbestos Detected	Chrysotile	
Asbestos by Gravimetry	U	2192	%	0.001							0.002	
Total Asbestos	U	2192	%	0.001							0.002	
Moisture	N	2030	%	0.020	10	11	12	9.1	9.1	5.8	7.0	6.1
Soil Colour	N	2040		N/A	Black	Brown	Black	Brown	Brown	Black	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	10.6	10.3	9.2	11.4	11.4	11.2	8.3	8.7
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	0.50	0.60	2.6	0.80	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	1.3	4.7	< 0.50	< 0.50	1.6	< 0.50	1.5
Iron (Total)	N	2430	mg/kg	100	30000	16000	15000	72000	84000	25000	61000	41000
Arsenic	M	2455	mg/kg	0.5	2.0	3.0	2.6	2.9	4.3	4.7	9.0	11
Cadmium	M	2455	mg/kg	0.10	0.10	< 0.10	0.10	0.13	0.29	0.27	1.4	0.69
Chromium	M	2455	mg/kg	0.5	79	32	29	290	210	69	62	88
Manganese	M	2455	mg/kg	1.0	5100	2300	1700	17000	14000	4900	4900	4400
Copper	M	2455	mg/kg	0.50	11	11	9.8	14	17	13	34	37
Mercury	M	2455	mg/kg	0.05	0.05	0.05	< 0.05	< 0.05	0.06	0.07	0.51	0.27
Nickel	M	2455	mg/kg	0.50	5.1	7.8	6.5	6.8	11	7.9	16	28
Lead	M	2455	mg/kg	0.50	23	14	72	26	56	45	180	150
Selenium	M	2455	mg/kg	0.25	0.99	0.61	1.0	0.31	0.60	0.98	1.6	1.8
Vanadium	U	2455	mg/kg	0.5	78	38	32	280	220	120	100	95
Zinc	M	2455	mg/kg	0.50	56	38	160	67	150	110	390	260
Organic Matter	M	2625	%	0.40	42	4.6	100	31	12	24	19	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
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	23	< 1.0	< 1.0	< 1.0	29	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	320	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	89	< 1.0	69	4400	< 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	23	89	< 5.0	69	4800	< 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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672	22-32672
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1494913	1494914	1494915	1494916	1494917	1494918	1494919	1494920
Order No.: PO115623			Client Sample Ref.:		T17-1	T17-2	S13-1	R13-1	R13-2	S12-1	R140-1	R140-2
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	2.00	1.10	0.70	2.20	1.00		
			Date Sampled:		24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022	24-Aug-2022
			Asbestos Lab:			DURHAM	DURHAM	DURHAM		DURHAM	COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	5.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	5.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	5.2	< 1.0	< 1.0	< 1.0	95	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	9.7	19	< 1.0	23	890	< 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	26	19	< 5.0	23	990	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	48	110	< 10	92	5700	< 10
Benzene	M	2760	µg/kg	1.0	11	< 1.0	< 1.0	4.4	< 1.0	8.2	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	13	< 1.0	< 1.0	4.5	< 1.0	8.3	< 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	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	2.2	< 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	4.3	8.2	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.70	1.3	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.23	0.32	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.48	0.77	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	2.8	0.89	5.8	3.9	8.2	8.0	1.1	3.6
Anthracene	M	2800	mg/kg	0.10	0.77	0.28	1.4	1.1	2.2	2.0	0.30	1.1
Fluoranthene	M	2800	mg/kg	0.10	3.4	1.2	5.7	5.3	12	9.9	2.2	4.1
Pyrene	M	2800	mg/kg	0.10	2.5	0.92	4.1	3.8	8.6	7.0	2.8	3.1
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.8	0.53	2.4	2.4	5.3	4.0	1.5	2.6
Chrysene	M	2800	mg/kg	0.10	1.7	0.55	3.3	2.2	6.0	4.7	1.4	2.9
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.8	< 0.10	3.5	3.9	6.8	5.2	3.3	4.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.93	< 0.10	1.1	1.1	2.2	1.8	1.1	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.9	< 0.10	2.1	2.6	4.6	3.6	1.8	2.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.4	< 0.10	1.6	2.0	3.2	2.5	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.63	< 0.10	0.70	0.64	0.57	0.52	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.4	< 0.10	1.5	2.0	3.0	2.7	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	22	4.4	33	37	73	52	16	25
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	0.054	< 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	0.23	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.10	< 0.020
Total Phenols	M	2920	mg/kg	0.10	0.23	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16	< 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.:	22-46467-1
Initial Date of Issue:	05-Jan-2023
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll Rebecca Marsden
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	9
Turnaround (Wkdays):	10
Date Approved:	05-Jan-2023
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	05-Dec-2022
Date Instructed:	06-Dec-2022
Results Due:	19-Dec-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1557446	1557447	1557448	1557449	1557450	1557451	1557452	1557453	1557454
		Client Sample ID.:			AN37-1	AN37-2	AM37-1	AM37-2	AM36-1	AL36-1	AL36-2	AM35-1	AM34-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	2.00	0.80	2.00	0.80	0.90	2.00	1.70	0.20
		Date Sampled:			01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-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	17	13	23	3.9	10	6.0	25	30	8.5
Soil Colour	N	2040		N/A	Grey	Brown	Brown	Brown	Brown	Grey	Black	Grey	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones, Roots and Wood	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	12.0	11.8	9.4	9.4	8.6	9.4	8.3	8.5	10.8
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	< 0.50	< 0.50	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	0.51	3.4	< 0.50	65	1.7	59	15	1.9
Iron (Total)	N	2430	mg/kg	100	5600	11000	58000	30000	26000	13000	26000	20000	70000
Arsenic	M	2455	mg/kg	0.5	4.2	6.1	16	4.9	18	6.3	49	41	13
Cadmium	M	2455	mg/kg	0.10	0.28	0.19	0.91	0.57	0.37	0.28	0.31	0.16	0.84
Chromium	M	2455	mg/kg	0.5	13	13	72	22	23	11	21	17	160
Manganese	M	2455	mg/kg	1.0	410	1400	2400	840	690	810	490	360	9700
Copper	M	2455	mg/kg	0.50	7.0	14	27	12	60	11	94	37	35
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	0.08	< 0.05	0.59	0.05	0.42	0.17	0.25
Nickel	M	2455	mg/kg	0.50	5.4	13	39	13	37	9.2	43	25	28
Lead	M	2455	mg/kg	0.50	21	27	64	19	85	160	100	33	170
Selenium	M	2455	mg/kg	0.25	0.61	1.8	2.4	0.81	2.7	0.88	6.3	3.1	2.6
Vanadium	U	2455	mg/kg	0.5	13	19	88	19	38	17	47	43	160
Zinc	M	2455	mg/kg	0.50	24	25	170	39	130	48	140	55	370
Aliphatic EPH >C8-C10	M	2690	mg/kg	1.00	15	15	14	15	15	14	14	14	15
Aliphatic VPH >C5-C6	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C10	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	M	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12	M	2690	mg/kg	2.00	3.2	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.4	2.3	< 2.0
Aliphatic EPH >C12-C16	M	2690	mg/kg	1.00	20	11	3.1	2.8	3.3	4.3	6.4	5.7	5.2
Aliphatic EPH >C16-C21	M	2690	mg/kg	2.00	26	9.3	< 2.0	2.6	< 2.0	48	4.8	4.8	9.9
Aliphatic EPH >C21-C35	M	2690	mg/kg	3.00	43	5.5	< 3.0	38	< 3.0	180	7.9	4.4	66
Aliphatic EPH >C35-C40	N	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	18	< 1.0	7.8	< 1.0	< 1.0	5.1
Total Aliphatic EPH >C10-C35	M	2690	mg/kg	5.00	92	28	7.9	45	6.9	240	21	17	83
Aromatic VPH >C5-C7	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	M	2780	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		Chemtest Job No.:			22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467
Quotation No.: Q22-28243		Chemtest Sample ID.:			1557446	1557447	1557448	1557449	1557450	1557451	1557452	1557453	1557454
		Client Sample ID.:			AN37-1	AN37-2	AM37-1	AM37-2	AM36-1	AL36-1	AL36-2	AM35-1	AM34-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	2.00	0.80	2.00	0.80	0.90	2.00	1.70	0.20
		Date Sampled:			01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022
		Asbestos Lab:				COVENTRY		COVENTRY		COVENTRY		COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total Aromatic VPH >C5-C10	M	2780	mg/kg	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12	M	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16	M	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21	N	2690	mg/kg	2.00	2.3	< 2.0	< 2.0	< 2.0	< 2.0	5.8	2.1	2.1	8.1
Aromatic EPH >C21-C35	M	2690	mg/kg	2.00	< 2.0	< 2.0	2.4	< 2.0	< 2.0	7.5	7.7	< 2.0	7.4
Aromatic EPH >C35-C40	N	2690	mg/kg	1.00	< 1.0	< 1.0	< 1.0	3.8	< 1.0	< 1.0	1.7	< 1.0	< 1.0
Total Aromatic EPH >C10-C35	M	2690	mg/kg	5.00	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	14	10	< 5.0	17
Total VPH >C5-C10	M	2780	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35	M	2690	mg/kg	10.00	96	30	12	48	< 10	250	32	20	100
Organic Matter	M	2625	%	0.40	15	8.5	5.0	10	14	6.2	36	7.4	7.6
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	0.19	< 0.10	0.31	< 0.10	1.7
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41
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	0.44
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	0.45	< 0.10	3.4
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.69
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	< 0.10	0.47	< 0.10	5.6
Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.20	< 0.10	0.43	< 0.10	4.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	2.2
Chrysene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.21	< 0.10	1.9
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	4.1
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	1.2
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	3.2
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	1.9
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	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.2	< 2.0	33
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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467	22-46467
Quotation No.: Q22-28243					**Chemtest Sample ID.:**	1557446	1557447	1557448	1557449	1557450	1557451	1557452	1557453	1557454
					Client Sample ID.:	AN37-1	AN37-2	AM37-1	AM37-2	AM36-1	AL36-1	AL36-2	AM35-1	AM34-1
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	1.00	2.00	0.80	2.00	0.80	0.90	2.00	1.70	0.20
					Date Sampled:	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022	01-Dec-2022
					Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY		COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
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.
2455	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.
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C40	Acetone/Heptane 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.
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8-C10 Aromatics: >C5–C7,>C7-C8,>C8–C10	Water extraction / Headspace GCxGC FID detection
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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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

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:	19 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	201212-45
Your Reference:	P18-669
Location:	Llanwern
Report No:	583536

This report has been revised and directly supersedes 582539 in its entirety.

We received 32 samples on Saturday December 12, 2020 and 32 of these samples were scheduled for analysis which was completed on Tuesday January 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

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23419848	2BSE-1		0.00 - 0.00	10/12/2020
23419856	2BSE-2		0.00 - 0.00	10/12/2020
23419865	2BSE-3		0.00 - 0.00	10/12/2020
23419873	2BSE-4		0.00 - 0.00	10/12/2020
23419881	2BSE-5		0.00 - 0.00	10/12/2020
23419682	2BSE-6		0.00 - 0.00	11/12/2020
23419690	2BSE-7		0.00 - 0.00	11/12/2020
23419695	2BSE-8		0.00 - 0.00	11/12/2020
23419701	2BSE-9		0.00 - 0.00	11/12/2020
23419706	2BSE-10		0.00 - 0.00	11/12/2020
23419712	2BSE-11		0.00 - 0.00	11/12/2020
23419718	2BSE-12		0.00 - 0.00	11/12/2020
23419728	2BSE-13		0.00 - 0.00	11/12/2020
23419733	2BSE-14		0.00 - 0.00	11/12/2020
23419739	2BSE-22		0.00 - 0.00	11/12/2020
23419751	2BSE-23		0.00 - 0.00	11/12/2020
23419758	2BSE-24		0.00 - 0.00	11/12/2020
23419763	2BSE-25		0.00 - 0.00	11/12/2020
23419769	2BSE-26		0.00 - 0.00	11/12/2020
23419775	2BSE-27		0.00 - 0.00	11/12/2020
23419781	2BSE-28		0.00 - 0.00	11/12/2020
23419786	2BSE-29		0.00 - 0.00	11/12/2020
23419792	2BSE-30		0.00 - 0.00	11/12/2020
23419798	2BSE-31		0.00 - 0.00	11/12/2020
23419803	2BSE-32		0.00 - 0.00	11/12/2020
23419821	2BSE-33		0.00 - 0.00	11/12/2020
23419826	2BSE-34		0.00 - 0.00	11/12/2020
23419833	2BSE-35		0.00 - 0.00	11/12/2020
23419813	M33-1		0.50 - 0.50	10/12/2020
23419841	M33-2		1.40 - 1.40	10/12/2020
23419678	N33-1		0.30 - 0.30	10/12/2020
23419744	N33-2		1.60 - 1.60	10/12/2020

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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)			23419848		23419856		23419865		23419873		23419881		23419682		23419690		23419695			
Customer Sample Reference			2BSE-1		2BSE-2		2BSE-3		2BSE-4		2BSE-5		2BSE-6		2BSE-7		2BSE-8			
AGS Reference																				
Depth (m)			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			
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
Ammonium Soil by Titration	All	NDPs: 0 Tests: 32	X			X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 16	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2											X								
Calorific Value (S)*	All	NDPs: 0 Tests: 13		X		X			X		X			X		X			X		X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 32	X			X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 32		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 32			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 32		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 32	X			X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 32	X			X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 32	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: 32		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 32		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 32			X		X			X		X			X		X			X	

23419751	2BSE-23		0.00 - 0.00	250g Amber Jar (ALE210)	S		x					x	x		x	x	x	x	x	x	x	x		
23419739	2BSE-22		0.00 - 0.00	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																	
23419733	2BSE-14		0.00 - 0.00	60g VOC (ALE215)	S									x										x	
				250g Amber Jar (ALE210)	S		x					x	x		x	x	x	x	x	x	x	x		
23419728	2BSE-13		0.00 - 0.00	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										x		
23419718	2BSE-12		0.00 - 0.00	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		
23419712	2BSE-11		0.00 - 0.00	60g VOC (ALE215)	S									x										x	
				250g Amber Jar (ALE210)	S		x				x	x	x		x	x	x	x	x	x	x	x		
				1kg TUB with Handle (ALE260)	S			x																	
23419706	2BSE-10		0.00 - 0.00	60g VOC (ALE215)	S									x										x	
				250g Amber Jar (ALE210)	S		x				x	x	x		x	x	x	x	x	x	x	x		
23419701	2BSE-9		0.00 - 0.00	60g VOC (ALE215)	S									x										x	
				250g Amber Jar (ALE210)	S		x				x	x	x		x	x	x	x	x	x	x	x		
				1kg TUB with Handle (ALE260)	S			x																	
23419695	2BSE-8		0.00 - 0.00	60g VOC (ALE215)	S									x										x	

CERTIFICATE OF ANALYSIS

SDG: 201212-45 **Client Reference:** P18-669 **Report Number:** 583536
Location: Llanwern **Order Number:** **Superseded Report:** 582539

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)																	
			23419751	23419758		23419763		23419769		23419775		23419781		23419786		23419792				
			Customer Sample Reference																	
			2BSE-23	2BSE-24		2BSE-25		2BSE-26		2BSE-27		2BSE-28		2BSE-29		2BSE-30				
			AGS Reference																	
			Depth (m)																	
			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				
			Container																	
			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)	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: 32			X		X			X		X		X		X				X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 16		X					X					X					X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 32	X			X		X			X		X		X		X				X
Metals in solid samples by OES	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
PAH by GCMS	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
pH	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 32			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: 32			X		X			X		X		X		X				X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 32			X		X			X		X		X		X				X	
VOC MS (S)	All	NDPs: 0 Tests: 32	X			X		X			X		X		X		X				X

23419744	N33-2		1.60 - 1.60	250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23419678	N33-1		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	
				1kg TUB with Handle (ALE260)	S		X	X											
23419841	M33-2		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	
23419813	M33-1		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												
23419833	2BSE-35		0.00 - 0.00	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23419826	2BSE-34		0.00 - 0.00	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												
23419821	2BSE-33		0.00 - 0.00	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23419803	2BSE-32		0.00 - 0.00	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												
23419798	2BSE-31		0.00 - 0.00	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:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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
			23419744	N33-2		1.60 - 1.60	60g VOC (ALE215)	S
GRO by GC-FID (S)	All	NDPs: 0 Tests: 32					X	
VOC MS (S)	All	NDPs: 0 Tests: 32					X	

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
23419848	2BSE-1	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419856	2BSE-2	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	Vegetation
23419865	2BSE-3	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419873	2BSE-4	0.00 - 0.00	Dark Brown	Stone/Soil	None	Stones
23419881	2BSE-5	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419682	2BSE-6	0.00 - 0.00	Black	Loamy Sand	Stones	None
23419690	2BSE-7	0.00 - 0.00	Dark Brown	Loamy Sand	Vegetation	Stones
23419695	2BSE-8	0.00 - 0.00	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23419701	2BSE-9	0.00 - 0.00	Black	Loamy Sand	Stones	None
23419706	2BSE-10	0.00 - 0.00	Black	Sandy Loam	Stones	None
23419712	2BSE-11	0.00 - 0.00	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23419718	2BSE-12	0.00 - 0.00	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23419728	2BSE-13	0.00 - 0.00	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23419733	2BSE-14	0.00 - 0.00	Black	Loamy Sand	Stones	Crushed Brick
23419739	2BSE-22	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419751	2BSE-23	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	Vegetation
23419758	2BSE-24	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	Vegetation
23419763	2BSE-25	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419769	2BSE-26	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419775	2BSE-27	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	Vegetation
23419781	2BSE-28	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	None
23419786	2BSE-29	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	Vegetation
23419792	2BSE-30	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	Vegetation
23419798	2BSE-31	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	None
23419803	2BSE-32	0.00 - 0.00	Dark Brown	Loamy Sand	Stones	None
23419821	2BSE-33	0.00 - 0.00	Dark Brown	Sandy Loam	Stones	None
23419826	2BSE-34	0.00 - 0.00	Black	Loamy Sand	Stones	Crushed Brick
23419833	2BSE-35	0.00 - 0.00	Black	Loamy Sand	Stones	None
23419813	M33-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23419841	M33-2	1.40 - 1.40	Dark Brown	Sand	Stones	Brick
23419678	N33-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	Vegetation
23419744	N33-2	1.60 - 1.60	Dark Brown	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:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	2BSE-1	2BSE-2	2BSE-3	2BSE-4	2BSE-5	2BSE-6
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	10/12/2020	10/12/2020	10/12/2020	10/12/2020	10/12/2020	11/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45	201212-45	201212-45	201212-45	201212-45
			Lab Sample No.(s)	23419848	23419856	23419865	23419873	23419881	23419682
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.9	13	12	10	10	11
Gross Calorific Value in Dry Matter Q(V/gr/d)	<0.5 MJ/kg	SUB		5.04	5.93	4.17	3.13	1.06	9.48
Gross Calorific Value Original Q(V/gr/ar)	<0.5 MJ/kg	SUB		4.41	5.32	3.56	2.78	0.95	8.27
Net Calorific Value in Dry Matter Q(V/net/d)	<0.5 MJ/kg	SUB		4.68	5.62	3.81	2.88	0.78	9.1
Net Calorific Value in Original Q(V/net/ar)	<0.5 MJ/kg	SUB		3.8	4.81	2.91	2.3	<0.5	7.64
Water Analytical M (ad)	<0.5 %	SUB		1.58	0.95	0.92	1.18	1.38	1.38
Water Gross M(ex)	<0.5 %	SUB		11.1	9.39	13.9	10.1	8.35	11.5
Water Total M(ar)	<0.5 %	SUB		12.5	10.2	14.7	11.1	9.61	12.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 #	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.02 M	<0.01 M	<0.01 #	0.0111 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0109 M	<0.02 M	<0.01 M	<0.01 #	<0.01 M	0.0112 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.03 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	<0.07 M	<0.035 M	<0.035 #	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		13.6 #	18.1 #	22.8 #	16.8 #	23.3 #	30 #
pH	1 pH Units	TM133		11.9 M	10.9 M	11.3 M	11.4 #	11.6 M	11.7 M
Cyanide, Total	<1 mg/kg	TM153		2.44 M	<1 M	<1 M	<1 #	2.96 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.61 M	6.63 M	5.83 M	6.09 #	7.19 M	1.2 M
Cadmium	<0.02 mg/kg	TM181		1.42 M	0.534 M	0.495 M	0.341 #	1.07 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		416 M	174 M	187 M	358 #	227 M	133 M
Copper	<1.4 mg/kg	TM181		25.7 M	19.6 M	14.6 M	20.1 #	<14 M	5.49 M
Iron	<1000 mg/kg	TM181		170000 #	116000 #	101000 #	130000 #	168000 #	102000 #
Lead	<0.7 mg/kg	TM181		179 M	83.8 M	65.1 M	54.2 #	273 M	<0.7 M
Manganese	<0.13 mg/kg	TM181		27700 M	16100 M	15400 M	23800 #	19100 M	20100 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<0.14 M	<0.14 M	<0.14 #	<1.4 M	0.512 M
Nickel	<0.2 mg/kg	TM181		21.6 M	12 M	10 M	9.43 #	18.1 M	<0.2 M
Selenium	<1 mg/kg	TM181		11.4 #	3.21 #	3.83 #	5.94 #	<10 #	<1 #
Vanadium	<0.2 mg/kg	TM181		872 #	330 #	281 #	699 #	701 #	144 #
Zinc	<1.9 mg/kg	TM181		491 M	352 M	235 M	199 #	631 M	<1.9 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:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	2BSE-7	2BSE-8	2BSE-9	2BSE-10	2BSE-11	2BSE-12
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45	201212-45	201212-45	201212-45	201212-45
			Lab Sample No.(s)	23419690	23419695	23419701	23419706	23419712	23419718
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	7.3	13	11	10	5.7
Gross Calorific Value in Dry Matter Q(V/gr/d)	<0.5 MJ/kg	SUB		7.59	7.12	8.46	8.62	8.43	7.47
Gross Calorific Value Original Q(V/gr/ar)	<0.5 MJ/kg	SUB		6.6	6.19	7.31	7.43	7.21	6.62
Net Calorific Value in Dry Matter Q(V/net/d)	<0.5 MJ/kg	SUB		7.22	6.71	8.07	8.24	8.02	7.11
Net Calorific Value in Original Q(V/net/ar)	<0.5 MJ/kg	SUB		5.98	5.61	6.66	6.79	6.53	6.04
Water Analytical M (ad)	<0.5 %	SUB		0.94	0.98	1.12	1.07	1.26	1.11
Water Gross M(ex)	<0.5 %	SUB		12.2	12.3	12.6	12.8	13.4	10.4
Water Total M(ar)	<0.5 %	SUB		13	13.1	13.6	13.8	14.4	11.4
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)		0.0114 M	0.0108 M	0.0115 M	0.0113 M	0.0111 M	<0.01
Cresols	<0.01 mg/kg	TM062 (S)		0.0114 M	0.0108 M	<0.01 M	0.0113 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	0.0222 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		32.9 #	19.5 #	60.7 #	28.6 #	45 #	31.2
pH	1 pH Units	TM133		11.6 M	11.2 M	11.6 M	11.4 M	11.3 M	11.6
Cyanide, Total	<1 mg/kg	TM153		1.03 M	<1 M	<1 M	<1 M	<1 M	<1
Arsenic	<0.6 mg/kg	TM181		4.84 M	56.8 M	1.06 M	13.6 M	6.63 M	10.1
Cadmium	<0.02 mg/kg	TM181		0.725 M	0.217 M	<0.02 M	0.977 M	0.825 M	0.45
Chromium	<0.9 mg/kg	TM181		200 M	227 M	3.97 M	195 M	282 M	253
Copper	<1.4 mg/kg	TM181		13.1 M	75.6 M	<1.4 M	19.2 M	21.5 M	23.9
Iron	<1000 mg/kg	TM181		78100 #	106000 #	94500 #	78500 #	90100 #	92900
Lead	<0.7 mg/kg	TM181		83 M	156 M	<0.7 M	157 M	112 M	82.8
Manganese	<0.13 mg/kg	TM181		15700 M	16500 M	18600 M	13400 M	15900 M	15400
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	0.499 M	<1.4 M	<0.14 M	<0.14
Nickel	<0.2 mg/kg	TM181		8.15 M	16.9 M	<0.2 M	25.2 M	12.3 M	15.9
Selenium	<1 mg/kg	TM181		3.43 #	1.3 #	<1 #	<10 #	3.94 #	3.74
Vanadium	<0.2 mg/kg	TM181		494 #	301 #	9.96 #	304 #	329 #	373
Zinc	<1.9 mg/kg	TM181		293 M	471 M	<1.9 M	433 M	357 M	316

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	2BSE-13	2BSE-14	2BSE-22	2BSE-23	2BSE-24	2BSE-25
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45	201212-45	201212-45	201212-45	201212-45
			Lab Sample No.(s)	23419728	23419733	23419739	23419751	23419758	23419763
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.8	16	15	15	17	14
Gross Calorific Value in Dry Matter Q(V/gr/d)	<0.5 MJ/kg	SUB		6.93					
Gross Calorific Value Original Q(V/gr/ar)	<0.5 MJ/kg	SUB		5.99					
Net Calorific Value in Dry Matter Q(V/net/d)	<0.5 MJ/kg	SUB		6.58					
Net Calorific Value in Original Q(V/net/ar)	<0.5 MJ/kg	SUB		5.37					
Water Analytical M (ad)	<0.5 %	SUB		1					
Water Gross M(ex)	<0.5 %	SUB		12.7					
Water Total M(ar)	<0.5 %	SUB		13.6					
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)		0.0109 M	0.0119 M	<0.01 M	0.0118 M	0.0121 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0117 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		34.3 #	27.8 #	21 #	20.3 #	33.4 #	20.5 #
pH	1 pH Units	TM133		11.6 M	11.5 M	11.8 M	10.7 M	10.6 M	11.3 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	2.13 M	<1 M	<1 M	1.38 M
Arsenic	<0.6 mg/kg	TM181		5.12 M	10.3 M	6.88 M	8.11 M	8.88 M	7.36 M
Cadmium	<0.02 mg/kg	TM181		0.557 M	1.38 M	1.21 M	2.07 M	0.647 M	0.793 M
Chromium	<0.9 mg/kg	TM181		144 M	118 M	318 M	129 M	209 M	217 M
Copper	<1.4 mg/kg	TM181		15.1 M	24 M	16.2 M	20.3 M	23.4 M	20.2 M
Iron	<1000 mg/kg	TM181		82200 #	72200 #	173000 #	94500 #	93600 #	138000 #
Lead	<0.7 mg/kg	TM181		61 M	185 M	246 M	114 M	105 M	190 M
Manganese	<0.13 mg/kg	TM181		11100 M	8640 M	23700 M	9910 M	11500 M	18900 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 M	<1.4 M	<0.14 M	<1.4 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		9.87 M	19 M	24.1 M	16.3 M	25.7 M	13.3 M
Selenium	<1 mg/kg	TM181		2.52 #	<1 #	11.8 #	1.87 #	<10 #	3.1 #
Vanadium	<0.2 mg/kg	TM181		258 #	154 #	587 #	178 #	228 #	578 #
Zinc	<1.9 mg/kg	TM181		300 M	536 M	580 M	370 M	302 M	566 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	2BSE-26	2BSE-27	2BSE-28	2BSE-29	2BSE-30	2BSE-31
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020	11/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45	201212-45	201212-45	201212-45	201212-45
			Lab Sample No.(s)	23419769	23419775	23419781	23419786	23419792	23419798
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	16	15	17	15	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)		0.0114 M	<0.01 M	<0.01 M	<0.01 M	0.0236 M	0.0117 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0119 M	<0.01 M	<0.01 M	0.0118 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 #	26.5 #	32.1 #	35 #	34.8 #	26.2 #
pH	1 pH Units	TM133		11.4 M	11.5 M	11.3 M	11.5 M	10.6 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.18 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	1.52 M	9.27 M	1.33 M	7.87 M	8.96 M
Cadmium	<0.02 mg/kg	TM181		0.253 M	<0.02 M	1.18 M	<0.02 M	1.16 M	0.894 M
Chromium	<0.9 mg/kg	TM181		348 M	129 M	216 M	<0.9 M	208 M	209 M
Copper	<1.4 mg/kg	TM181		15.5 M	8.73 M	20.6 M	<1.4 M	22.4 M	18.1 M
Iron	<1000 mg/kg	TM181		113000 #	115000 #	96000 #	111000 #	99500 #	90100 #
Lead	<0.7 mg/kg	TM181		58.3 M	<0.7 M	186 M	<0.7 M	181 M	132 M
Manganese	<0.13 mg/kg	TM181		23500 M	19200 M	14000 M	15500 M	13300 M	13700 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	0.504 M	<1.4 M	0.624 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		14.6 M	<0.2 M	21.1 M	<0.2 M	22.1 M	18.9 M
Selenium	<1 mg/kg	TM181		13.7 #	<1 #	<10 #	<1 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		698 #	146 #	305 #	3.89 #	272 #	329 #
Zinc	<1.9 mg/kg	TM181		171 M	<1.9 M	539 M	<1.9 M	512 M	372 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	2BSE-32	2BSE-33	2BSE-34	2BSE-35	M33-1	M33-2
			Depth (m)	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	0.00 - 0.00	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	11/12/2020	11/12/2020	11/12/2020	11/12/2020	10/12/2020	10/12/2020
			Sample Time	.	.	.	.	.	.
			Date Received	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45	201212-45	201212-45	201212-45	201212-45
			Lab Sample No.(s)	23419803	23419821	23419826	23419833	23419813	23419841
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	16	12	14	3.6	5.3
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	0.0119 M	0.0113 M	0.0232 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	<0.01 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		25.2 #	39.7 #	24.3 #	22.4 #	<0.35 #	0.359 #
pH	1 pH Units	TM133		11.6 M	11.5 M	11.6 M	11.4 M	9.26 M	12.8 M
Cyanide, Total	<1 mg/kg	TM153		1.28 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		6.41 M	1.39 M	9.12 M	1.63 M	2.71 M	2.96 M
Cadmium	<0.02 mg/kg	TM181		0.626 M	<0.02 M	<0.2 M	<0.02 M	0.245 M	0.606 M
Chromium	<0.9 mg/kg	TM181		376 M	53.2 M	230 M	109 M	4.13 M	958 M
Copper	<1.4 mg/kg	TM181		18.8 M	4.52 M	51.1 M	11.3 M	8.69 M	23.7 M
Iron	<1000 mg/kg	TM181		122000 #	110000 #	136000 #	129000 #	7440 #	144000 #
Lead	<0.7 mg/kg	TM181		99.4 M	<0.7 M	75.2 M	<0.7 M	12.1 M	6.65 M
Manganese	<0.13 mg/kg	TM181		25100 M	13500 M	18700 M	13600 M	171 M	40200 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	0.536 M	<1.4 M	0.661 M	<0.14 M	<0.14 M
Nickel	<0.2 mg/kg	TM181		21 M	<0.2 M	41.8 M	<0.2 M	2.17 M	2.61 M
Selenium	<1 mg/kg	TM181		13.8 #	<1 #	<10 #	<1 #	<1 #	7.37 #
Vanadium	<0.2 mg/kg	TM181		597 #	87.9 #	413 #	150 #	4.53 #	685 #
Zinc	<1.9 mg/kg	TM181		282 M	<1.9 M	231 M	<1.9 M	13.2 M	66.7 M

CERTIFICATE OF ANALYSIS

SDG:	201212-45	**Client Reference:**	P18-669	**Report Number:**	583536
Location:	Llanwern	**Order Number:**		**Superseded Report:**	582539

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.	N33-1	N33-2
			Depth (m)	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	10/12/2020	10/12/2020
			Sample Time	.	.
			Date Received	12/12/2020	12/12/2020
			SDG Ref	201212-45	201212-45
			Lab Sample No.(s)	23419678	23419744
			AGS Reference		
Moisture Content Ratio (% of as received sample)	%	PM024		9.9	9.8
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)		0.0222 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		3.09 #	<0.35 #
pH	1 pH Units	TM133		11.4 M	8.54 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		9.86 M	44.9 M
Cadmium	<0.02 mg/kg	TM181		0.618 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		201 M	<9 M
Copper	<1.4 mg/kg	TM181		20.2 M	<14 M
Iron	<1000 mg/kg	TM181		133000 #	443000 #
Lead	<0.7 mg/kg	TM181		42 M	16.5 M
Manganese	<0.13 mg/kg	TM181		18200 M	16400 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	1.56 M
Nickel	<0.2 mg/kg	TM181		14.2 M	18.5 M
Selenium	<1 mg/kg	TM181		3.76 #	<10 #
Vanadium	<0.2 mg/kg	TM181		252 #	31.9 #
Zinc	<1.9 mg/kg	TM181		164 M	48 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 #	