Appendix B: Photographic Report

Phase 5e1 – Llanwern – Photographic Report



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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



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

Appendix C: Chemical Screening Summary Table

Client: Rodgers Leask Environmental	Chemtest Job No.:					
Quotation No.: Q21-24056	Chemtest Sample ID.:					
Project: P18-669						
Client: Rodgers Leask Environmental	Job No.:					
Quotation No.: Q21-24056	Sample ID.:					
	Client Sample Ref.:					
	Sample Type:					
	Top Depth (m):					
	Bottom Depth (m):					
	Date Sampled:					
	Asbestos Lab:					

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	Upper 95th Percentile Fill Materials *	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
							1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444	1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453	1367454	1367455	1367456	1367457	1367458	1367459	1367460
							3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29	3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38	3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45
							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
							0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
							0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
							04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
							NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
ACM Type	U	2192		N/A			-		-		-		-		-		-		-		-		-		-		-		-		-
Asbestos Identification	U	2192		N/A			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Asbestos Quantification Total			%																												
Moisture	N	2030	%	0.020			5.1	3.2	5	4.5	3.4	4.3	5.7	5.7	5.7	6.1	6.7	5.4	5.3	5.6	6.1	5.1	5	6	4.6	5	5.9	0.82	5.4	2.7	3.7
Soil Colour	N	2040		N/A			Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Brown
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
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
pH	M	2010		4.0			10.4	10.8	10.7	11.6	11.1	11.7	11.3	10.9	11.1	11.2	10.2	10.5	9.3	10.3	10.5	9.9	11	10.1	10	10	10.7	10.5	10.2	10.6	10
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	5.144	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.5	0.9	1.5	0.9	1	3	< 0.50	0.6	0.8	< 0.50	< 0.50	1.1	1.2	1.2	< 0.50	< 0.50	1.8	0.8	1.1	0.7
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	16	0.71	0.72	1	0.78	1.2	0.65	1.9	1.3	2.3	0.73	4	1.3	1.2	1.4	2.2	2.6	0.86	0.76	0.78	0.58	3.3	2.4	1	0.93	1.6
Iron (Total)	N	2430	mg/kg	100	349148.01	219550	240000	210000	220000	200000	210000	210000	190000	140000	150000	180000	120000	51000	270000	230000	28000	31000	27000	32000	33000	33000	30000	32000	32000	32000	34000
Arsenic	M	2450	mg/kg	1.0	2902.688	29.2	19	17	19	18	18	19	21	16	19	18	18	22	17	20	19	12	9.9	17	17	25	24	14	13	12	18
Cadmium	M	2450	mg/kg	0.10	83.661	1.878	0.45	0.35	0.5	0.42	0.36	1.2	0.66	0.31	0.43	0.53	1.7	1.7	0.75	0.94	0.79	0.42	0.31	0.75	0.71	0.82	0.94	0.42	0.36	0.38	0.74
Chromium	M	2450	mg/kg	1.0	10806.907	559	280	300	300	420	300	410	450	280	330	400	120	180	38	110	110	77	240	80	70	80	310	130	80	88	98
Manganese	M	2450	mg/kg	5.0	38175.69	34380	19000	19000	19000	31000	18000	29000	31000	20000	25000	28000	5700	12000	6300	6800	6300	3300	17000	5800	4400	6400	18000	10000	6800	6700	7400
Copper	M	2450	mg/kg	0.50	516.883	88.04	43	29	32	35	25	35	39	30	27	32	38	35	24	35	25	19	150	24	20	31	34	22	35	24	27
Mercury	M	2450	mg/kg	0.10	150.809	1.4	0.42	0.38	0.52	0.51	0.48	0.52	0.95	0.5	0.64	0.76	2	0.64	0.4	0.42	0.33	0.2	0.49	0.52	0.43	0.7	0.63	0.25	0.16	0.18	0.24
Nickel	M	2450	mg/kg	0.50	13188.601	46	41	31	39	49	33	49	48	40	40	44	38	36	40	39	34	27	33	30	26	29	41	38	37	31	41
Lead	M	2450	mg/kg	0.50	18032.071	253	66	58	75	87	59	110	110	61	84	97	280	290	110	150	99	73	81	150	120	170	140	150	220	210	160
Selenium	M	2450	mg/kg	0.20	804.305	12.58	0.22	< 0.20	< 0.20	0.31	< 0.20	< 0.20	< 0.20	0.36	0.22	< 0.20	< 0.20	0.39	< 0.20	0.22	0.37	0.69	0.36	0.58	0.48	0.66	0.32	< 0.20	0.45	0.47	< 0.20
Vanadium	U	2450	mg/kg	5.0	1840.198	1260	350	410	360	1700	360	1600	1700	1000	1300	1500	170	250	60	130	140	100	890	120	100	130	410	480	290	330	310
Zinc	M	2450	mg/kg	0.50	157599.516	560	110	97	110	110	100	110	120	99	110	110	530	560	190	380	150	140	94	200	180	120	200	130	130	190	190
Organic Matter	M	2625	%	0.40			5	1	2.8	3.5	4.7	2.1	6.6	6.9	5.5	3.3	12	7.9	9.5	8.5	6.9	6.2	13	1.5	12	2.8	2.8	13	64	24	16
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	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
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626	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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98	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
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	4.834	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.5	< 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
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	12.92	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	515488.601	20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	29	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	64895263.78	42.2	5.9	20	< 1.0	16	< 1.0	43	51	41	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	64895263.78	250	230	200	90	290	< 1.0	250	250	280	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	440	< 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	64895263.78	27.26	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	5.0			240	220	90	310	< 5.0	300	340	320	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	440	< 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	9.752	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
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89	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
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594	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
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	4.834	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	26	< 1.0	< 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	1.0	517.061	12.92	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13	< 1.0	< 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	1.0	1631.673	65.5	17	11	4.6	11	< 1.0	25	13	4.9	< 1.0	< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	6.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	274	62	84	51	110	< 1.0	130	89	110	< 1.0	< 1.0	< 1.0	250	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	41
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	14.64	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	5.0			80	95	56	120	< 5.0	160	100	120	< 5.0	< 5.0	< 5.0	430	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	57
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0			320	320	150	430	< 10	460	440	430	< 10	< 10	< 10	430	< 10	< 10	< 10	< 10	570	< 10	< 10	< 10	< 10	< 10	< 10	< 10	57
Benzene	M	2760	µg/kg	1.0	4358	180	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	147182	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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	92030	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	< 1.0	< 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	1.0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	0.10	31.45	7.062	< 0.10	< 0.10	2.1	0.59	< 0.10	0.58	0.8	0.79	0.87	1	2.9	4.1	< 0.10	4.2	0.82	< 0.10	0.72	< 0.10	1.5	< 0.10	1.9	1.2	2.1	1.6	1.2
Acenaphthylene	N	2800	mg/kg	0.10	19.168	1.79	< 0.10	< 0.10	1.6	0.2	< 0.10	0.14	0.18	0.11	0.14	0.12	0.41	1	< 0.10	0.56	0.17	< 0.10	0.2	< 0.10	0.2	< 0.10	0.43	0.13	0.16	0.21	0.21
Acenaphthene	M	2800	mg/kg	0.10	34.073	0.45	< 0.10	< 0.10	0.2	0.12	< 0.10	0.17	0.18	0.19	0.18	0.16	0.28	0.22	< 0.10	0.13	0.12	< 0.10	0.18	< 0.10	0.15	< 0.10	< 0.10	0.33	0.3	0.35	0.16
Fluorene	M	2800	mg/kg	0.10	31.077	1.212	< 0.10	< 0.10	1.9	0.17	< 0.10	0.2	0.16	0.1	0.21	0.1	0.36	0.84	< 0.10	0.33	0.27	< 0.10	0.15	< 0.10	0.26	< 0.10	0.2	0.18	0.24	0.26	0.21
Phenanthrene	M	2800	mg/kg	0.10	31.077	10.24	2.5	1.7	27	4	2.3	4.7	2.1	1.4	1.7	2	2.1	6	0.56	1.8	1.4	0.91	3.6	0.46	1.8	0.46	2	3.4	4.1	4.1	2.6
Anthracene	M	2800	mg/kg	0.10	39.119	3.3	0.53	0.36	4.7	0.53	0.56	0.57	0.47	0.26	0.27	0.33	0.54	1.9	0.12	0.63	0.28	0.2	0.74	0.11	0.32	0.12	0.5	0.41	0.59	0.88	0.59
Fluoranthene	M	2800	mg/kg	0.10	7.614	19.6	3.5	2.4	34	5.4	2.8	5.3	5	2.4	2.8	3.7	3.1	9.4	0.29	3.1	1.7	1.3	6	0.65	1.7	0.83	3	3.8	4.2	4.9	3.2
Pyrene	M	2800	mg/kg	0.10	87.557	14.12	2.5	1.8	23	3.5	2	3.8	4.1	1.9	2.3	2.9	2.5	6.5	0.3	2.6	1.3	1	4.1	0.48	1.3	0.74	2.2	3	3.1	3.7	2.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	9.2	1.4	1.2	12	3.2	1.3	3.2	3.5	1.3	1.8	2.2	2.1	4.3	0.18	2.3	0.86	0.65	4	0.33	0.9	0.78	1.3	1.6	2	2.3	1.3
Chrysene	M	2800	mg/kg	0.10	711.578	8.464	1.5	1.1	12	3.9	1.4	3.7	3.7	1.7	2.1	2.8	2.1	4.1	0.25	2.2	0.79	0.74	4.3	0.35	0.96	0.8	1.3	1.9	2.4	2.7	1.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	12	2.1	1.6	15	4.9	1.9	4.9	5.1	2.3	3.4	4.1	3.6	5.8	< 0.10	3.8	1.1	1.1	5.3	0.51	1.4	1.2	1.8	2.3	2.7	2.9	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	4.2	0.74	0.53	4.6	1.6	0.6	1.8	1.9	0.85	1.3	1.5	1.2	2	< 0.10	1.2	0.38	0.33	1.8	0.19	0.45	0.44	0.73	0.87	0.84	0.9	0.51
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	9.7	1.5	0.97	13	2.7	1.2	3.3	3.7	1.4	2.1	2.9	2.8	4.2	< 0.10	2.8	0.84	0.8	3.4	0.37	1	1	1.3	1.7	1.8	2	1.2
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	7.18	1.3	0.99	9.9	2.6	1.1	3.2	3.3	1.5	2.1	2.8	2.6	3.7	< 0.10	2.3	0.71	< 0.10	3.2	< 0.10	0.83	< 0.10	1	1.5	1.3	1.3	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	1.4	0.27	0.16	1.4	0.59	0.16	0.54	0.61	0.23	0.41	0.53	0.41	0.53	< 0.10	0.42	0.13	< 0.10	0.77	< 0.10	0.18	< 0.10	0.22	0.24	0.37	0.19	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	5.92	1.1	0.83	7.9	2.1	0.85	2.2	2.8	1.2	1.7	2.3	2	2.8	< 0.10	1.8	0.64	< 0.10	2.4	< 0.10	0.75	< 0.10	0.91	1.3	1.3	1.2	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0			19	14	170	36	16	38	38	18	23	29	29	57	< 2.0	30	12	7	41	3.5	14	6.4	19	24	28	30	17
Resorcinol	M	2920	mg/kg	0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020	3.497	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
Cresols	M	2920	mg/kg	0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.10			< 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

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:				
Quotation No.: Q21-24056	Chemtest Sample ID.:				
Project: P18-669					
Client: Rodgers Leask Environmental	Job No.:				
Quotation No.: Q21-24056	Sample ID.:				
	Client Sample Ref.:				
	Sample Type:				
	Top Depth (m):				
	Bottom Depth (m):				
	Date Sampled:				
	Asbestos Lab:				

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Asbestos Quantification Total			%		
Moisture	N	2030	%	0.020	
Soil Colour	N	2040		N/A	
Other Material	N	2040		N/A	
Soil Texture	N	2040		N/A	
pH	M	2010		4.0	
Cyanide (Total)	M	2300	mg/kg	0.50	2.313
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983
Iron (Total)	N	2430	mg/kg	100	349148.01
Arsenic	M	2450	mg/kg	1.0	2902.688
Cadmium	M	2450	mg/kg	0.10	83.661
Chromium	M	2450	mg/kg	1.0	10806.907
Manganese	M	2450	mg/kg	5.0	38175.69
Copper	M	2450	mg/kg	0.50	516.883
Mercury	M	2450	mg/kg	0.10	150.809
Nickel	M	2450	mg/kg	0.50	13188.601
Lead	M	2450	mg/kg	0.50	18032.071
Selenium	M	2450	mg/kg	0.20	804.305
Vanadium	U	2450	mg/kg	5.0	1840.198
Zinc	M	2450	mg/kg	0.50	157599.516
Organic Matter	M	2625	%	0.40	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	4358
Toluene	M	2760	µg/kg	1.0	147182
Ethylbenzene	M	2760	µg/kg	1.0	92030
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	31.45
Acenaphthylene	N	2800	mg/kg	0.10	19.168
Acenaphthene	M	2800	mg/kg	0.10	34.073
Fluorene	M	2800	mg/kg	0.10	31.077
Phenanthrene	M	2800	mg/kg	0.10	31.077
Anthracene	M	2800	mg/kg	0.10	39.119
Fluoranthene	M	2800	mg/kg	0.10	7.614
Pyrene	M	2800	mg/kg	0.10	87.557
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38
Chrysene	M	2800	mg/kg	0.10	711.578
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229
Total Of 16 PAH's	N	2800	mg/kg	2.0	
Resorcinol	M	2920	mg/kg	0.020	
Phenol	M	2920	mg/kg	0.020	3.497
Cresols	M	2920	mg/kg	0.020	
Xylenols	M	2920	mg/kg	0.020	
1-Naphthol	N	2920	mg/kg	0.020	
Trimethylphenols	M	2920	mg/kg	0.020	
Total Phenols	M	2920	mg/kg	0.10	

														Fill Material Samples													F
22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-05118	22-05118	22-05118	22-05118
1367461	1367462	1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471	1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480	1367481	1367482	1370291	1370292	1370293	1370294		
3CP46	3CP47	3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62	3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71	3CP72	3CP73	3CP1-47	3CP1-48	3CP1-49	3CP1-50		
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		
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20						
0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20						
04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022		
	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB		NEW-ASB		
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		
3.7	3.1	3.9	3.1	4.8	5.9	4.7	5.9	5.7	7.1	5.4	5.3	4.3	4.6	10	8.8	13	11	6.6	4.9	4	5	8.7	8	6.6	9.9		
Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black	Black	Black	Brown	Brown	Brown	Brown		
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		
Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Gravel	Gravel	Gravel		
9.8	9.8	10.9	11	11.9	11.9	11.9	11.5	11.9	> 12.0	12	12	11.6	11.4	10.5	10.6	9.6	9.8	9.9	10.6	9.9	10.3	9.3	11	11.5	12		
1	0.9	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.5	< 0.50	1	1.2	4.3	5.3	0.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50		
1.9	1.8	0.73	1.1	< 0.50	< 0.50	0.7	0.54	< 0.50	< 0.50	0.54	0.58	0.67	0.78	1	1	3.3	3	1.4	0.86	1.1	1.2	12	10	5.3	2.6		
34000	30000	27000	27000	27000	27000	27000	28000	27000	27000	27000	27000	27000	26000	29000	29000	29000	26000	32000	30000	32000	31000	200000	120000	140000	150000		
16	17	16	13	12	15	16	12	13	13	13	14	15	17	14	12	8.5	11	17	17	16	13	14	15	17	22		
0.61	0.55	0.52	0.43	0.83	0.82	0.52	0.52	0.69	0.48	0.47	0.63	0.47	0.77	0.59	0.55	0.86	0.56	0.45	0.43	0.17	0.25	0.85	0.83	0.83	0.53		
100	100	320	290	310	300	270	210	270	250	280	290	280	240	150	180	46	77	67	110	45	51	70	280	390	480		
5200	6500	22000	21000	22000	20000	17000	13000	18000	18000	22000	22000	18000	18000	7500	8100	2200	3200	5100	6900	4400	4700	4900	23000	24000	36000		
28	25	35	30	30	31	27	21	26	26	31	34	25	23	22	23	20	29	23	26	27	29	23	25	25	52		
0.25	0.26	0.74	0.7	1	1.2	0.59	0.48	0.49	0.53	0.83	0.83	0.69	0.85	0.58	0.56	0.39	0.52	0.25	0.25	0.13	0.17	0.37	0.27	0.34	0.73		
38	42	45	36	31	35	38	27	36	36	37	37	35	33	26	24	18	20	33	34	38	28	32	39	37	46		
160	150	110	89	130	150	120	110	91	130	130	170	110	120	140	140	130	150	310	250	360	360	88	63	69	61		
0.27	0.21	< 0.20	< 0.20	0.28	< 0.20	0.31	0.61	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.36	0.43	0.95	0.95	0.67	0.25	0.67	0.59	0.27	< 0.20	< 0.20	< 0.20		
250	320	1200	1100	1000	1000	700	570	810	760	870	990	1000	1100	230	220	76	130	240	300	200	200	91	1400	1600	1600		
150	140	100	94	110	130	110	100	90	100	91	120	110	120	160	220	100	140	120	97	61	70	240	130	140	120		
28	7.2	4.7	5.2	6.2	7.2	11	7.1	6.2	5.3	4.7	8.3	9.8	7.6	13	24	48	72	55	72	91	60	12	3.3	2.6	6.7		
< 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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8.3	4.8	11	8.2	7.9	8.3	11	7.3	7.4	6.5	< 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	8.2	8.6	11	25	11	8.4	8.1	9.1	8	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	< 1.0	< 1.0	< 1.0	< 1.0	7.4	< 1.0	< 1.0	< 1.0	15	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120	29	< 1.0	< 1.0	< 1.0	8.1	300	< 1.0	< 1.0	190	160	< 1.0		
< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	310	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	17	13	140	62	26	17	19	24	330	16	< 5.0	190	160	< 5.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	2.1	< 1.0	< 1.0	< 1.0	< 1.0	7.2	< 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	5.6	< 1.0	< 1.0	2.5	< 1.0	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	4.6	1.7	7.2	< 1.0	2.2	< 1.0	< 1.0	16	3.9	< 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	4.2	< 1.0	12	28	< 1.0	7.1	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.8	6.2	8.8	40	16	1.4	3	1.2	1.5	3.4	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.6	1	15	210	< 1.0	< 1.0	3.6	< 1.0	21	7.4	< 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	< 1.0	< 1.0	71	4.6	530	500	1.1	23	< 1.0	1.6	110	< 1.0	< 1.0	290	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	< 1.0	< 1.0	< 1.0	< 1.0		
< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	96	14	580	780	22	36	7.6	26	140	18	< 5.0	290	< 5.0	< 5.0		
< 10	< 10	< 10	< 10	< 10	440	< 10	< 10	< 10	< 10	< 10	< 10	110	27	720	840	48	53	27	50	460	34	< 10	480	160	< 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	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.4	0.67	1.1	0.68	0.7	0.84	1.4	0.71	0.78	0.5	0.68	0.89	1.3	1	< 0.10	2.1	< 0.10	1.7	2	2.7	< 0.10	22	18	11	9.7		
0.22	0.22	0.2	0.14	< 0.10	0.14	0.23	0.32	0.18	0.38	0.15	0.2	0.24	0.57	0.17	< 0.10	0.19	< 0.10	< 0.10	0.14	0.15	< 0.10	2	0.3	0.32	0.25		
0.31	0.26	0.25	0.23	0.16	0.18	0.1	0.71	0.18	0.15	0.14	0.15	0.13	0.2	< 0.10	< 0.10	0.2	< 0.10	0.17	0.38	0.39	< 0.10	1.4	1.8	0.8	1.2		
0.31	0.27	0.17	0.15	0.14	< 0.10	0.2	0.5	0.14	0.32	0.23	0.17	0.29	0.51	0.33	< 0.10	0.48	< 0.10	0.22	0.43	0.36	< 0.10	2.1	0.5	0.52	0.31		
2.9	2.1	3.5	3.2	3.3	3.4	5.4	6.2	3.4	5.2	2.7	4.3	2.6	1.9	2.1	1.9	2.9	4	2.3	3	3.5	0.44	14	4.7	5.5	4.7		
0.59	0.43	0.6	0.58	0.38	0.38	1.1	1.2	0.48	0.67	0.86	0.54	0.79	1.8	0.84	0.72	0.76	1.4	0.52	0.75	0.76	0.12	3.7	1.1	1	0.58		
2.6	2.6	6.9	6.3	3.9	5.6	7.3	11	4.9	6.1	4.8	7.3	4.7	11	3.2	1.8	3	3.4	2	2.9	3	0.95	19	8.5	6.1	6.4		
1.9	2.2	4.6	4.4	2.6	4.1	4.4	8.6	3.3	3.8	3.8	5.1	3.7	7	2.8	1.9	2.4	3.4	1.6	2.5	2.6	0.81	13	7.2	4.1	5.1		
1	1.3	4.3	3.4	1.8	3	3.5	6.1	2.8	2.9	3.8	3.2	3	5.2	2.6	1.3	1.6	2	0.87	1.3	1.4	0.74	6.8	4.6	2.9	3.3		
1.2	1.5	4.2	3.7	2.4	3.5	3.6	5.9	3.1	3.1	4	3.7	3.1	5.3	2.6	1.2	1.8	2.2	1.1	1.6	1.7	0.77	7.3	5.1	3.3	4		
1.2	1.7	5.5	5.1	3.1	4.9	4	9.6	4.1	4.1	4.5	4.7	3.8	6.1	2.7	1.3	1.8	2	1.1	1.7	1.6	1.3	8.9	7.5	4.1	5.2		
0.35	0.59	2.1	1.7	0.97	1.9	1.4	3.5	1.4	1.3	2.7	1.8	2.3	2.3	2	0.61	0.8	0.89	0.37	0.57	0.51	0.48	2.9	2.7	1.5	1.9		
0.87	1.3	3.9	3.6	1.9	3.7	2.7	10	3	3	3.9	3.5	3.2	4.2	2.5	0.92	1.3	1.7	0.77	1.3	1.3	1.1	7	6.3	3.1	4.5		
< 0.10	1.1	3.3	2.9	1.8	3.2	2.1	7.5	2.6	2.2	3.6	2.9	2.9	3.5	2.4	< 0.10	1.1	< 0.10	0.53	0.76	0.77	0.74	5.5	5.1	2.8	3.4		
< 0.10	0.66	0.9	0.54	0.42	0.63	0.54	1.1	0.56	0.54	2	0.61	1.5	0.84	1.6	< 0.10	0.55	< 0.10	0.19	0.24	0.27	0.26	0.97	0.88	0.57	0.7		
< 0.10	1.1	2.3	2.3	1.5	2.3	1.6	5.7	2	1.6	3.2	2.5	2.6	2.8	2.1	< 0.10	0.99	< 0.10	0.6	1	0.93	0.67	4.8	4.8	2.6	3.5		
16	19	43	39	25	38	39	79	33	36	41	41	36	55	29	12	22	21	14	20	22	8.4	120	79	50	55		
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 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		

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:				
Quotation No.: Q21-24056	Chemtest Sample ID.:				
Project: P18-669					
Client: Rodgers Leask Environmental	Job No.:				
Quotation No.: Q21-24056	Sample ID.:				
	Client Sample Ref.:				
	Sample Type:				
	Top Depth (m):				
	Bottom Depth (m):				
	Date Sampled:				
	Asbestos Lab:				

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Asbestos Quantification Total			%		
Moisture	N	2030	%	0.020	
Soil Colour	N	2040		N/A	
Other Material	N	2040		N/A	
Soil Texture	N	2040		N/A	
pH	M	2010		4.0	
Cyanide (Total)	M	2300	mg/kg	0.50	2.313
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983
Iron (Total)	N	2430	mg/kg	100	349148.01
Arsenic	M	2450	mg/kg	1.0	2902.688
Cadmium	M	2450	mg/kg	0.10	83.661
Chromium	M	2450	mg/kg	1.0	10806.907
Manganese	M	2450	mg/kg	5.0	38175.69
Copper	M	2450	mg/kg	0.50	516.883
Mercury	M	2450	mg/kg	0.10	150.809
Nickel	M	2450	mg/kg	0.50	13188.601
Lead	M	2450	mg/kg	0.50	18032.071
Selenium	M	2450	mg/kg	0.20	804.305
Vanadium	U	2450	mg/kg	5.0	1840.198
Zinc	M	2450	mg/kg	0.50	157599.516
Organic Matter	M	2625	%	0.40	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	4358
Toluene	M	2760	µg/kg	1.0	147182
Ethylbenzene	M	2760	µg/kg	1.0	92030
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	31.45
Acenaphthylene	N	2800	mg/kg	0.10	19.168
Acenaphthene	M	2800	mg/kg	0.10	34.073
Fluorene	M	2800	mg/kg	0.10	31.077
Phenanthrene	M	2800	mg/kg	0.10	31.077
Anthracene	M	2800	mg/kg	0.10	39.119
Fluoranthene	M	2800	mg/kg	0.10	7.614
Pyrene	M	2800	mg/kg	0.10	87.557
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38
Chrysene	M	2800	mg/kg	0.10	711.578
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229
Total Of 16 PAH's	N	2800	mg/kg	2.0	
Resorcinol	M	2920	mg/kg	0.020	
Phenol	M	2920	mg/kg	0.020	3.497
Cresols	M	2920	mg/kg	0.020	
Xylenols	M	2920	mg/kg	0.020	
1-Naphthol	N	2920	mg/kg	0.020	
Trimethylphenols	M	2920	mg/kg	0.020	
Total Phenols	M	2920	mg/kg	0.10	

	Ill Material Samples			Fill Material Samples							Fill Material Samples																		
	22-05118	22-05118	22-05118	21-21180	21-21180	21-26393	21-26393	22-10648	22-10648			22-23919	22-23919	22-26760	22-14707	22-14707	22-14707	22-15876	22-15876	22-15876	22-15876	22-19583	22-19583	22-19583	22-19583	22-19583	22-14707
	1370295	1370296	1370297	1225698	1225700	1251520	1251521	1395707	1395708	210218-32	210218-32	1455828	1455831	1468353	1414486	1414487	1414488	1419723	1419724	1419725	1419726	1435997	1435998	1435999	1436000	1436001	1414489
	3CP1-51	3CP1-52	3CP1-53	R-CSP-1	R-CSP-2	R-CSP-3	R-CSP-4	R-CSP-7	R-CSP-8	W208-1	W208-2	3CP2-1	3CP2-2	3CP2-3	5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11	5e1-SP1-12	5e1-SP2-1
	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				0.2	0.2	0.2	0.2	0.2	0.2	0.20-0.20	0.20-0.20	0.20	0.20	0.20	0.2	0.2	0.2	0.20	0.20	0.20	0.20						0.2
				0.2	0.2	0.2	0.2	0.2	0.2			0.20	0.20	0.20	0.2	0.2	0.2										0.2
	10-Feb-2022	10-Feb-2022	10-Feb-2022	18-Jun-2021	18-Jun-2021	29-Jul-2021	29-Jul-2021	18-Mar-2022	18-Mar-2022	17/02/2021	17/02/2021	22-Jun-2022	22-Jun-2022	13-Jul-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	19-Apr-2022
	NEW-ASB		NEW-ASB			NEW-ASB	NEW-ASB	NEW-ASB				DURHAM		DURHAM	NEW-ASB		NEW-ASB	COVENTRY		COVENTRY			DURHAM		DURHAM		
	-		-			-	-	-				-		-	-		-	-		-			-		-		
	No Asbestos Detected		No Asbestos Detected			No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		Not 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		
										-	-																
8.8	6.7	7.9	2.2	2.2	8.5	7.8	12	11	13	17	9.4	13	9.2	41	39	35	7.3	3.7	3.6	8.4	15	16	13	22	12	27
Brown	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Dark Brown	Dark Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Gravel	Gravel	Gravel	Gravel	Gravel	Sand	Sand	Sand	Sand	Sandy Clay Loam	Sandy Clay Loam	Sand	Sand	Sand	Clay	Gravel	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Gravel
> 12.0	> 12.0	> 12.0	11.2	11.6	10.1	11.1	8.8	9.4	10.4	10.6	6.1	7.7	10.1	10.7	11.1	11	10.4	9.2	10.2	9.6	9.5	8.6	10	8.3	9.3	10.4
< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.4	1.5	2.1	1.3	<1	<1	0.7	0.9	< 0.50	4.3	< 0.50	< 0.50	1.5	< 0.50	< 0.50	1.2	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50
2	1.5	1.3	0.78	0.93	0.75	20	2.6	8.6	<12	<12	2.2	6.9	5.1	2.7	3.9	11	20	4	0.86	11	2.9	22	2.7	33	1.6	7.3
140000	140000	130000	13000	16000	25000	23000	24000	23000	63900	61700	28000	26000	57000	24000	40000	39000	44000	51000	50000	30000	32000	33000	29000	22000	36000	30000
20	20	22	8.8	13	19	15	13	12	17.8	11.6	12	10	6.2	7.4	12	8.8	26	37	35	12	17	10	15	8.8	21	6
0.43	0.25	0.46	0.25	0.4	1.1	1.4	0.78	0.44	0.382	0.448	0.36	0.56	0.25	0.44	0.56	0.16	< 0.10	0.75	< 0.10	< 0.10	0.24	0.25	0.12	0.18	0.28	0.24
420	550	550	62	66	90	260	120	40	205	104	89	39	200	74	58	50	57	66	46	23	39	18	37	12	41	35
32000	38000	43000	2900	3200	6000	11000	6500	2100	10100	6800	6500	2400	11000	4500	3600	2800	1400	10000	5500	900	3900	1200	3200	580	3700	2400
31	25	29	6.3	8.5	70	130	25	28	33.6	27.9	32	18	17	11	13	12	26	98	35	27	21	20	7.7	17	23	11
0.66	0.48	0.54	< 0.10	0.11	0.46	0.34	0.73	0.29	<1	<1	0.17	0.23	0.14	< 0.10	0.26	0.1	0.15	1.3	0.12	0.06	0.18	0.07	0.05	0.1	0.26	< 0.10
41	40	41	11	12	28	22	24	26	25.7	24.2	18	18	14	15	19	17	28	32	28	24	17	20	15	20	20	17
53	26	37	35	55	170	230	120	200	55.3	98.3	59	59	44	25	34	26	33	210	72	30	45	48	21	33	71	29
< 0.20	< 0.20	< 0.20	0.67	< 0.20	0.51	0.53	0.49	0.67	<10	<10	1.3	1.6	1.8	< 0.20	< 0.20	0.23	1.5	1.4	0.89	1.7	2.9	1.7	2	3.5	1.4	0.29
1600	2200	2300	65	92	120	230	150	57	163	150	330	74	410	70	130	72	100	150	140	46	90	44	78	27	100	75
110	69	78	110	160	530	640	360	170	264	285	130	250	110	70	83	58	100	440	120	64	96	94	61	47	150	88
3.6	2.6	2.2	1.7	3.5	5.2	3.3	9.8	36	4.12	6.86	6.8	10	5.3	10	14	17	5.5	3.3	0.98	12	3.1	8.3	2.2	5.2	7.4	7.9
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0276	0.0372	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0288	0.0576	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1	<1	33	32	< 1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.7	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.1	< 1.0	<1	<1	12	14	< 1.0	830	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15	< 1.0
< 1.0	< 1.0	< 1.0	54	< 1.0	< 1.0	< 1.0	220	67	9.55	5.26	< 1.0	< 1.0	< 1.0	2500	< 1.0	< 1.0	40	< 1.0	< 1.0	< 1.0	< 1.0	150	61	< 1.0	51	210
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.06	1.56	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 5.0	< 5.0	< 5.0	54	< 5.0	< 5.0	< 5.0	230	67	12.7	7.22	45	46	< 5.0	3700	< 5.0	< 5.0	40	< 5.0	< 5.0	< 5.0	< 5.0	150	61	< 5.0	71	210
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
6.9	5.3	6.6	0.23	0.31	< 0.10	< 0.10	1.6	1.9	0.107	0.0985	0.89	0.75	< 0.10	7.5	1.3	3	1.2	< 0.10	0.31	1.3	< 0.10	< 0.10	< 0.10	< 0.10	3.1	< 0.10
0.25	0.1	0.19	< 0.10	0.16	< 0.10	< 0.10	0.69	0.25	0.0836	0.0761	0.17	0.11	< 0.10	0.47	0.12	0.32	0.17	< 0.10	0.22	0.29	< 0.10	< 0.10	< 0.10	< 0.10	0.22	< 0.10
0.9	0.45	0.58	< 0.10	< 0.10	< 0.10	< 0.10	0.21	0.15	0.0192	0.0219	0.14	0.11	< 0.10	0.3	0.14	0.36	2.7	< 0.10	0.16	0.17	< 0.10	< 0.10	< 0.10	< 0.10	0.29	< 0.10
0.26	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	0.77	0.39	0.0444	0.0868	0.24	0.24	< 0.10	0.52	0.25	0.49	4.3	< 0.10	0.15	0.44	< 0.10	< 0.10	< 0.10	< 0.10	0.29	< 0.10
3.9	1.5	2.9	0.63	0.91	1.9	1	6.2	2.4	0.318	0.53	2.4	1.4	2.1	2.8	1.5	3.4	57	0.55	0.6	2.4	< 0.10	0.68	< 0.10	< 0.10	1.9	0.83
0.54	0.21	0.35	0.15	0.26	0.43	0.22	1.9	0.51	0.124	0.166	0.48	0.3	0.48	0.86	0.35	0.68	11	< 0.10	0.17	0.56	< 0.10	0.14	< 0.10	< 0.10	0.36	0.24
6.1	2.2	4.9	1.4	1.9	3.3	1.7	10	2.5	0.799	0.835	2.9	1.5	2.4	4.6	1.8	4.5	40	0.39	0.5	2.4	0.89	0.43	0.4	0.28	1.8	1.2
4.7	1.5	3.6	1	1.2	2.8	1.5	7.5	1.8	0.633	0.655	1.9	1.1	1.7	3.6	1.3	3.4	29	0.45	0.54	1.7	0.65	0.38	0.31	0.17	1.3	0.98
3.5	0.99	3	0.6	0.85	1.6	0.78	4.4	1.1	0.379	0.379	1.5	0.73	1.1	2.3	0.89	2.2	11	< 0.10	0.2	0.85	< 0.10	< 0.10	< 0.10	< 0.10	1	0.72
4	1.3	3.5	0.55	0.84	2	1.1	4.6	1.4	0.358	0.371	1.6	0.56	0.93	2.3	0.76	1.8	11	< 0.10	0.18	0.8	< 0.10	< 0.10	< 0.10	< 0.10	0.94	0.68
5.4	1.5	4.4	0.84	1.1	2.8	1.5	6	1.7	0.577	0.533	2	1	1.6	3	1.3	3.1	9.4	< 0.10	0.22	0.93	< 0.10	< 0.10	< 0.10	< 0.10	1	0.62
2	0.48	1.6	0.48	0.42	0.91	0.45	2.2	0.46	0.193	0.178	0.74	0.3	0.5	0.96	0.34	1	3.5	< 0.10	0.14	0.39	< 0.10	< 0.10	< 0.10	< 0.10	0.63	0.25
4.6	1	3.3	0.56	0.79	1.5	0.77	4.2	1.1	0.341	0.298	1.3	0.67	1.1	2.5	1.1	2.6	6.8	< 0.10	0.2	0.71	< 0.10	< 0.10	< 0.10	< 0.10	1	0.73
3.7	1.1	2.5	0.61	0.34	1.5	0.89	3.2	0.72	0.219	0.245	0.8	< 0.10	< 0.10	1.9	0.65	1.7	3.6	< 0.10	0.2	0.43	< 0.10	< 0.10	< 0.10	< 0.10	0.71	0.61
0.7	0.2	0.59	< 0.10	< 0.10	0.26	0.15	0.66	0.21	0.0495	0.0603	0.17	< 0.10	< 0.10	0.44	0.12	0.51	0.91	< 0.10	0.12	0.24	< 0.10	< 0.10	< 0.10	< 0.10	0.12	0.14
3.5	0.93	2.6	0.49	0.37	1.5	0.93	3.4	0.87	0.258	0.23	0.95	< 0.10	< 0.10	1.6	0.68	1.6	3.3	< 0.10	0.18	0.44	< 0.10	< 0.10	< 0.10	< 0.10	0.75	0.57
51	19	41	7.6	9.6	21	11	58	18	4.5	4.76	18	8.8	12	36	13	31	200	< 2.0	4.1	14	< 2.0	< 2.0	< 2.0	< 2.0	15	7.6
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.01	<0.01	< 0.020	< 0.020	0.092	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.015	<0.015	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020			< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	<0.035	<0.035	< 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

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental		Chemtest Job No.:														
Quotation No.: Q21-24056		Chemtest Sample ID.:														
Project: P18-669								Fill Material Samples					Fill Material			
Client: Rodgers Leask Environmental		Job No.:				22-14707	22-14707	22-15876	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
Quotation No.: Q21-24056		Sample ID.:				1414490	1414491	1419727								
		Client Sample Ref.:			Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	5e1-SP2-2	5e1-SP2-3	5e1-SP2-4	AH29-1	AH29-2	AH30-1	AH30-2	AH31-1	AH31-2	AI31-1	AI31-2
		Sample Type:				SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
		Top Depth (m):				0.2	0.2	0.20	0.30-0.30	1.60-1.60	0.20-0.20	1.40-1.40	0.50-0.50	1.70-1.70	0.50-0.50	1.50-1.50
		Bottom Depth (m):				0.2	0.2									
		Date Sampled:				19-Apr-2022	19-Apr-2022	28-Apr-2022	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
		Asbestos Lab:				NEW-ASB		COVENTRY								
Determinand	Accred.	SOP	Units	LOD												
ACM Type	U	2192		N/A		-		-								
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected
Asbestos Quantification Total			%													
Moisture	N	2030	%	0.020		27	39	1.8	13	11	15	11	9.8	12	12	14
Soil Colour	N	2040		N/A		Brown	Grey	Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A		Gravel	Gravel	Sand	Loamy Sand	Sand	Sandy Clay	Sand	Sandy Loam	Sandy Loam	Sandy Loam	Sand
pH	M	2010		4.0		9.9	10.7	9	10.6	11.5	8.63	9.7	9.75	10.5	11.3	11.2
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	5.9	< 0.50	3	<1	<1	<1	<1	<1	<1	<1	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	10	0.93	20	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100	349148.01	31000	35000	39000	151000	169000	27800	397000	40900	40600	119000	137000
Arsenic	M	2450	mg/kg	1.0	2902.688	6.4	9	16	8.79	6.58	10.3	65	9.28	7.6	8.19	7.92
Cadmium	M	2450	mg/kg	0.10	83.661	0.35	0.39	0.66	1.77	1.52	0.419	4.47	0.902	0.626	1.98	2.13
Chromium	M	2450	mg/kg	1.0	10806.907	28	210	66	158	615	23.4	397	52.9	39.1	145	159
Manganese	M	2450	mg/kg	5.0	38175.69	1500	16000	4500	10900	38400	1180	34200	3580	3130	18700	12800
Copper	M	2450	mg/kg	0.50	516.883	12	26	25	34.5	15.1	19.2	220	20.5	27.7	18.4	15
Mercury	M	2450	mg/kg	0.10	150.809	0.29	0.36	0.14	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4
Nickel	M	2450	mg/kg	0.50	13188.601	13	31	31	23.6	12.9	24.1	168	17.5	19.5	16.4	14.7
Lead	M	2450	mg/kg	0.50	18032.071	46	58	110	58.1	24.8	27.5	95.3	48.9	33	152	147
Selenium	M	2450	mg/kg	0.20	804.305	0.27	0.22	1.6	<10	18	<10	<10	<10	<10	12.4	<10
Vanadium	U	2450	mg/kg	5.0	1840.198	57	810	170	216	483	28.7	469	96.8	89.8	422	310
Zinc	M	2450	mg/kg	0.50	157599.516	120	100	350	204	72.4	135	514	124	90.6	459	415
Organic Matter	M	2625	%	0.40		21	3.8	13	13.8	13.8	1.28	7.6	11.3	6.91	12.8	10.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0128
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0429
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0626
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	<1	<1	<1	4.06
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	< 1.0	< 1.0	< 1.0	3.88	10.3	<1	1.43	1.34	2.52	2.3	6.4
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	210	< 1.0	240	15.8	35.5	<1	5.63	5.35	7.93	13.3	20.3
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	< 1.0	< 1.0	< 1.0	5.14	13.6	<1	<1	<1	<1	4.06	7.87
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		210	< 5.0	240	25.6	63.2	<5	7.53	7.14	10.6	19.7	39
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0418
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	<1	<1	<1	2.3
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	< 1.0	< 1.0	< 1.0	5.24	<1	<1	<1	2.91	3.46	7.64	14
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	< 1.0	< 1.0	190	17.2	26.8	<1	5.66	24.4	30.4	28.3	34.1
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	< 1.0	< 1.0	< 1.0	1.95	<1	<1	<1	4.08	5.83	1.3	2.99
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	190	25	35.6	<5	7.51	31.6	39.9	37.8	53.9
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		210	< 10	440	50.6	98.8	<10	15	38.7	50.6	57.5	93
Benzene	M	2760	µg/kg	1.0	4358	< 1.0	< 1.0	< 1.0	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	M	2760	µg/kg	1.0	147182	< 1.0	< 1.0	< 1.0	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1.0	92030	< 1.0	< 1.0	< 1.0	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200
Naphthalene	M	2800	mg/kg	0.10	31.45	2.4	0.59	1.1	0.201	0.182	0.0125	0.0399	0.13	0.0622	0.396	0.747
Acenaphthylene	N	2800	mg/kg	0.10	19.168	0.26	0.16	0.12	0.121	0.0452	<0.012	0.0265	0.102	0.0822	0.217	0.522
Acenaphthene	M	2800	mg/kg	0.10	34.073	0.15	< 0.10	0.18	0.0205	0.0599	<0.008	<0.008	0.0121	0.0114	0.0505	0.104
Fluorene	M	2800	mg/kg	0.10	31.077	0.39	0.17	0.14	0.0603	0.0525	<0.01	<0.01	0.0636	0.0172	0.169	0.655
Phenanthrene	M	2800	mg/kg	0.10	31.077	2.8	1.4	0.94	0.51	0.362	0.0892	0.0453	0.771	0.194	1.59	3.7
Anthracene	M	2800	mg/kg	0.10	39.119	0.56	0.3	0.14	0.156	0.0876	0.027	<0.016	0.153	0.0702	0.486	0.82
Fluoranthene	M	2800	mg/kg	0.10	7.614	2.8	2.1	0.99	1.03	0.59	0.174	0.0801	1.25	0.52	2.88	4.86
Pyrene	M	2800	mg/kg	0.10	87.557	2.3	1.4	0.73	0.831	0.52	0.129	0.0695	0.901	0.371	2.14	3.51
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	1.2	0.99	0.62	0.612	0.318	0.0847	0.0521	0.555	0.289	1.31	2.05
Chrysene	M	2800	mg/kg	0.10	711.578	1.1	1.2	0.6	0.671	0.333	0.0931	0.0552	0.526	0.267	1.19	2.07
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	1.9	1	0.89	1.1	0.536	0.124	0.0914	0.814	0.449	1.91	2.78
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	0.24	0.33	0.32	0.305	0.189	0.0391	0.0291	0.261	0.149	0.642	0.841
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	1.3	0.87	0.68	0.604	0.333	0.0683	0.0569	0.493	0.298	1.22	1.64
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	0.94	0.74	0.43	0.519	0.317	0.0603	0.0692	0.464	0.324	1.12	1.29
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	0.15	0.26	0.24	0.116	0.0504	<0.023	<0.023	0.0897	0.0673	0.219	0.268
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	0.96	0.68	0.43	0.498	0.266	0.0574	0.0702	0.407	0.275	0.961	1.19
Total Of 16 PAH's	N	2800	mg/kg	2.0		20	12	8.5	7.36	4.24	0.959	0.685	7	3.45	16.5	27
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020								
Phenol	M	2920	mg/kg	0.020	3.497	< 0.020	< 0.020	< 0.020	0.0115	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0116
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020								
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020								
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035

						Fill Material Samples						
Job No.:	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
Client Sample Ref.:	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1	AL28-1
Sample Type:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Top Depth (m):	0.70-0.70	1.50-1.50	0.40-0.40	1.50-1.50	0.80-0.80	1.00-1.00	0.20-0.20	1.00-1.00	0.10-0.10	1.10-1.10	1.00-1.00	0.50-0.50
Date Sampled:	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021	1/29/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021
Determinand												
ACM Type												
Asbestos Identification	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	-	-
Asbestos Quantification Total												
Moisture	1.4	10	13	20	17	7.5	12	13	11	23	16	6.9
Soil Colour	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Grey	Dark Brown	Grey	Dark Brown	Black	Black	Dark Brown
Other Material	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones
Soil Texture	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sandy Loam	Sand	Sand	Sand
pH	9.91	9.58	8.83	9.57	12.1	12	9.22	11.3	10.5	10.8	11.4	12.5
Cyanide (Total)	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ammoniacal Nitrogen	<12	<12	<12	18.6	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	338000	-	49600	-	49900	152000	58900	54800	230000	-	-	-
Arsenic	14.2	9.37	7.95	11.5	<6	<6	7.22	11.2	10.3	6.83	6.44	<6
Cadmium	2.29	1.51	0.923	0.632	0.469	1.27	0.769	1.47	2.19	0.45	0.963	1.09
Chromium	<9	<9	17.8	30.6	205	723	21.9	222	142	15.3	265	1080
Manganese	4850	2970	1360	1360	14900	34000	1710	8170	5740	1150	3190	48700
Copper	23.5	14.5	34.6	31.3	<14	37.9	<14	40.9	36.5	21.7	16.4	14.3
Mercury	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	36.9	21.7	17.5	33.3	4.61	13.1	24.3	26.3	37.2	11.3	14.4	5.25
Lead	39.7	24.7	52.8	47.6	39.6	137	44.3	60.4	46.7	57.2	34.2	22.4
Selenium	<10	<10	<10	<10	13.4	23.3	<10	<10	<10	<10	<10	30.6
Vanadium	49.6	36.4	34.8	43	244	543	32.7	285	97.3	26	233	840
Zinc	131	80.8	70.3	86.9	42.9	94.1	77.6	265	109	75.3	68.4	40.6
Organic Matter	3.95	4.22	>100	22.9	1.81	2.6	12.1	38.4	17.2	-	31.5	<0.35
Aliphatic TPH >C5-C6	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic TPH >C6-C8	<0.01	<0.01	0.0184	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic TPH >C8-C10	<0.01	0.02	0.0426	0.0225	<0.01	<0.01	<0.01	0.0104	<0.01	0.0284	<0.01	<0.01
Aliphatic TPH >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic TPH >C12-C16	<1	<1	10.4	<1	7.39	2.78	<1	2.16	<1	4.91	1.96	<1
Aliphatic TPH >C16-C21	1.1	<1	20.9	6.19	26.3	14.8	<1	4.49	10.4	15.3	18.8	<1
Aliphatic TPH >C21-C35	5.09	1.41	27.1	18.6	66.6	54.9	2.72	1.94	16.7	22.7	12.1	12.3
Aliphatic TPH >C35-C44	<1	<1	4.98	5.25	11.2	13.6	1.09	<1	<1	1.93	<1	1.68
Total Aliphatic Hydrocarbons	6.74	<5	63.9	31	112	86.2	<5	8.98	32	45.2	33.9	14.9
Aromatic TPH >C5-C7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C7-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	ai31	<0.01	<0.01
Aromatic TPH >C8-C10	<0.01	0.0133	0.0288	0.015	<0.01	<0.01	<0.01	<0.01	<0.01	0.0194	<0.01	<0.01
Aromatic TPH >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic TPH >C12-C16	<1	<1	1.02	<1	<1	<1	<1	<1	<1	1.03	2.32	<1
Aromatic TPH >C16-C21	<1	<1	4.73	1.87	1.52	<1	1.42	1.99	6.63	6.51	32.2	<1
Aromatic TPH >C21-C35	<1	<1	28.8	16.4	8.94	6.37	12.3	18.5	23.4	13.2	110	<1
Aromatic TPH >C35-C44	<1	<1	2.34	1.03	<1	<1	5.14	10.9	<1	<1	11.1	<1
Total Aromatic Hydrocarbons	<5	<5	36.9	19.8	11.7	7.99	18.9	31.8	35.5	21.8	156	<5
Total Petroleum Hydrocarbons	<10	<10	101	50.9	123	94.2	18.9	40.8	67.6	67	190	14.9
Benzene	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Naphthalene	<0.009	<0.009	0.112	0.117	0.14	0.0195	0.0319	0.027	0.568	0.134	0.547	<0.009
Acenaphthylene	<0.012	<0.012	0.173	0.191	0.0627	<0.012	0.101	0.0266	0.665	0.0585	0.932	<0.012
Acenaphthene	<0.008	<0.008	<0.008	<0.008	0.0228	<0.008	<0.008	<0.008	<0.008	0.0144	0.064	<0.008
Fluorene	<0.01	<0.01	0.0344	0.0581	0.0331	<0.01	<0.01	0.0187	1.05	0.0895	0.562	<0.01
Phenanthrene	0.0438	0.0223	0.233	0.35	0.306	0.101	0.128	0.151	6.25	0.835	3.77	0.0173
Anthracene	<0.016	<0.016	0.0712	0.0991	0.0785	0.0178	0.0494	0.0308	2.26	0.268	1.44	<0.016
Fluoranthene	0.0642	0.0312	0.956	0.874	0.597	0.339	0.511	0.225	7.65	0.886	11.2	0.0484
Pyrene	0.0464	0.0271	0.892	0.727	0.462	0.316	0.416	0.17	5.15	0.659	9.49	0.0522
Benzo[a]anthracene	0.0297	0.0307	0.732	0.484	0.33	0.177	0.317	0.115	2.72	0.564	4.8	0.0227
Chrysene	0.0304	0.0371	0.56	0.514	0.391	0.195	0.316	0.115	2.22	0.567	4.92	0.0329
Benzo[b]fluoranthene	0.0409	0.0641	1.45	0.937	0.587	0.295	0.675	0.184	3.19	0.771	7.25	0.0502
Benzo[k]fluoranthene	<0.014	0.0192	0.43	0.28	0.181	0.114	0.232	0.0548	0.98	0.238	1.71	0.0185
Benzo[a]pyrene	0.0241	0.0351	1.06	0.57	0.332	0.19	0.429	0.106	2	0.537	4.08	#VALUE!
Indeno(1,2,3-c,d)Pyrene	0.0236	0.038	0.972	0.566	0.318	0.204	0.471	0.0894	1.85	0.377	4.21	0.0231
Dibenz(a,h)Anthracene	<0.023	<0.023	0.164	0.108	0.0689	0.0325	0.0854	<0.023	0.324	0.0991	0.686	<0.023
Benzo[g,h,i]perylene	<0.024	0.0359	0.86	0.524	0.298	0.162	0.407	0.0851	1.32	0.361	3.36	<0.024
Total Of 16 PAH's	0.303	0.341	8.7	6.4	4.21	2.16	4.17	1.4	38.2	6.46	59	0.265
Resorcinol												
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	<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	<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												
Trimethylphenols												
Total Phenols	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035

	Fill Material Samples						Fill Material Samples				
Job No.:	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32	210202-91	210202-91	210202-91	210202-91
Client Sample Ref.:	AL28-2	AL29-1	AL30-1	AL30-2	AL31-1	AL31-2	AL33-1	AJ21-1	AJ21-2	AK21-1	AK21-2
Sample Type:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
Top Depth (m):	1.20-1.20	0.80-0.80	0.50-0.50	2.00-2.00	0.50-0.50	1.50-1.50	0.80-0.80	0.30-0.30	1.30-1.30	0.50-0.50	1.20-1.20
Date Sampled:	1/29/2021	1/29/2021	1/28/2021	1/28/2021	1/28/2021	1/28/2021	1/29/2021	1/29/2021	1/29/2021	1/29/2021	1/29/2021
Determinand											
ACM Type											
Asbestos Identification	Not Detected	Not Detected	Not Detected	-	Not Detected	-	-	Not Detected	-	Not Detected	-
Asbestos Quantification Total											
Moisture	6.9	9.3	12	9.3	21	12	11	6.7	9.4	14	13
Soil Colour	Dark Brown	Dark Brown	Grey	Grey	Grey	Dark Brown	Dark Brown	Dark Brown	Light Brown	Dark Brown	Dark Brown
Other Material	Stones	Brick	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones
Soil Texture	Sand	Sand	Sand	Sand	Sand	Sand	Stone/Soil	Loamy Sand	Sand	Sandy Clay	Loamy Sand
pH	12.4	11.5	10.6	11.9	10.6	9.1	11.9	10.2	9.22	8.84	10.3
Cyanide (Total)	<1	1.02	<1	<1	<1	<1	<1	<1	<1	<1	4.21
Ammoniacal Nitrogen	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	163000	166000	90000	144000	95800	32100	-	98000	15600	30300	43300
Arsenic	<6	<6	8.72	<6	<6	11.4	7.73	<6	61.5	11.8	<6
Cadmium	1.19	1.42	1.22	1.45	1.11	0.662	1.01	0.394	1.72	0.353	0.439
Chromium	936	836	235	653	68.5	25.3	1170	132	11.6	14.4	31
Manganese	48700	43500	11800	35700	11400	1690	16300	8510	2030	1050	5120
Copper	<14	23.3	19.2	15.3	<14	24	53.3	15.9	11	16.7	<14
Mercury	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<1
Nickel	5.37	9.39	23.6	5.78	22.8	26.6	496	23	8.83	24.3	10.8
Lead	23.5	100	90	<7	23.3	19.8	26.8	43.1	80.1	32.4	76.3
Selenium	31.2	29.5	10.2	19.7	<10	<10	10.4	<10	1.71	<1	<10
Vanadium	709	684	218	544	94.3	40.1	255	70.4	34	26.4	38.5
Zinc	57.3	123	198	39.5	81.3	64.9	70.7	131	573	117	237
Organic Matter	3.31	6.14	20.5	21.2	54.5	3.33	1.62	5.07	2.09	2.09	11.1
Aliphatic TPH >C5-C6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic TPH >C6-C8	<0.01	<0.01	<0.01	<0.01	<0.01	0.0114	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic TPH >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	0.0148	<0.01	<0.01	<0.01	<0.01	<0.01
Aliphatic TPH >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic TPH >C12-C16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aliphatic TPH >C16-C21	1.39	12.6	3.81	3.08	2.5	1.15	<1	1.11	<1	<1	27.6
Aliphatic TPH >C21-C35	11.8	44.5	19.7	10.5	22.6	5	4.26	2.41	<1	<1	1010
Aliphatic TPH >C35-C44	1.51	12.2	8.16	1.46	30.7	<1	<1	<1	<1	<1	1330
Total Aliphatic Hydrocarbons	15	70.2	32.1	15.3	56.4	6.5	5.54	<5	<5	<5	2370
Aromatic TPH >C5-C7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C7-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C10-C12	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic TPH >C12-C16	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Aromatic TPH >C16-C21	<1	1.57	6.39	<1	4.87	<1	<1	2.26	3.77	<1	18.8
Aromatic TPH >C21-C35	1.96	11.4	29	3.36	45.4	1.45	3.8	43.2	3.67	<1	930
Aromatic TPH >C35-C44	<1	<1	2.25	<1	4	<1	<1	12.6	<1	<1	85.3
Total Aromatic Hydrocarbons	<5	14.4	38.4	<5	55.2	<5	5.32	58.1	8.5	<5	1030
Total Petroleum Hydrocarbons	15	84.6	70.5	15.3	112	<10	10.9	58.1	<10	<10	3400
Benzene	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Naphthalene	0.0244	0.141	0.19	0.0524	0.143	0.0115	0.0705	0.217	0.011	<0.009	<0.009
Acenaphthylene	<0.012	0.0472	0.164	0.0599	0.0639	<0.012	0.0305	<0.012	<0.012	<0.012	<0.012
Acenaphthene	<0.008	0.0247	0.037	<0.008	0.0119	<0.008	<0.008	<0.008	0.0679	<0.008	<0.008
Fluorene	0.0112	0.0454	0.136	0.0281	0.037	<0.01	0.0124	<0.01	0.0824	<0.01	<0.01
Phenanthrene	0.107	0.409	0.943	0.406	0.39	0.0288	0.113	0.54	1.45	0.0545	4.16
Anthracene	0.0389	0.0967	0.303	0.126	0.101	<0.016	0.0308	<0.016	0.286	0.0199	<0.016
Fluoranthene	0.184	0.776	1.82	0.666	0.704	0.0385	0.208	1.12	1.72	0.142	4.72
Pyrene	0.141	0.58	1.33	0.496	0.526	0.0304	0.163	0.864	1.24	0.119	3.89
Benzo[a]anthracene	0.086	0.307	0.857	0.255	0.409	0.0232	0.126	0.577	0.601	0.0854	1.71
Chrysene	0.0972	0.309	0.838	0.271	0.391	0.0292	0.143	0.456	0.495	0.088	2.28
Benzo[b]fluoranthene	0.13	0.473	1.2	0.34	0.525	0.0383	0.247	0.859	0.455	0.11	2.54
Benzo[k]fluoranthene	0.0479	0.14	0.38	0.101	0.181	<0.014	0.0746	<0.014	0.16	0.0336	<0.014
Benzo[a]pyrene	0.077	0.259	0.692	0.201	0.382	0.02	0.149	0.48	0.259	0.0673	1.22
Indeno(1,2,3-c,d)Pyrene	0.0711	0.268	0.589	0.175	0.286	<0.018	0.175	0.407	0.137	0.0422	1.31
Dibenz(a,h)Anthracene	<0.023	0.0471	0.132	0.0411	0.0642	<0.023	0.0311	<0.023	0.036	<0.023	<0.023
Benzo[g,h,i]perylene	0.0672	0.208	0.546	0.175	0.261	<0.024	0.142	<0.024	0.126	0.0403	<0.024
Total Of 16 PAH's	1.08	4.13	10.2	3.39	4.48	0.22	1.72	5.52	7.13	0.801	21.8
Resorcinol											
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Xylenols	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015
1-Naphthol											
Trimethylphenols											
Total Phenols	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035

*LOD used where < LOD is recorded.

Below screening value

Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:				
Quotation No.: Q21-24056	Chemtest Sample ID.:				
Project: P18-669					
Client: Rodgers Leask Environmental	Job No.:				
Quotation No.: Q21-24056	Sample ID.:				
	Client Sample Ref.:				
	Sample Type:				
	Top Depth (m):				
	Bottom Depth (m):				
	Date Sampled:				
	Asbestos Lab:				

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Asbestos Quantification Total			%		
Moisture	N	2030	%	0.020	
Soil Colour	N	2040		N/A	
Other Material	N	2040		N/A	
Soil Texture	N	2040		N/A	
pH	M	2010		4.0	
Cyanide (Total)	M	2300	mg/kg	0.50	2.313
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983
Iron (Total)	N	2430	mg/kg	100	349148.01
Arsenic	M	2450	mg/kg	1.0	2902.688
Cadmium	M	2450	mg/kg	0.10	83.661
Chromium	M	2450	mg/kg	1.0	10806.907
Manganese	M	2450	mg/kg	5.0	38175.69
Copper	M	2450	mg/kg	0.50	516.883
Mercury	M	2450	mg/kg	0.10	150.809
Nickel	M	2450	mg/kg	0.50	13188.601
Lead	M	2450	mg/kg	0.50	18032.071
Selenium	M	2450	mg/kg	0.20	804.305
Vanadium	U	2450	mg/kg	5.0	1840.198
Zinc	M	2450	mg/kg	0.50	157599.516
Organic Matter	M	2625	%	0.40	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	4358
Toluene	M	2760	µg/kg	1.0	147182
Ethylbenzene	M	2760	µg/kg	1.0	92030
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	31.45
Acenaphthylene	N	2800	mg/kg	0.10	19.168
Acenaphthene	M	2800	mg/kg	0.10	34.073
Fluorene	M	2800	mg/kg	0.10	31.077
Phenanthrene	M	2800	mg/kg	0.10	31.077
Anthracene	M	2800	mg/kg	0.10	39.119
Fluoranthene	M	2800	mg/kg	0.10	7.614
Pyrene	M	2800	mg/kg	0.10	87.557
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38
Chrysene	M	2800	mg/kg	0.10	711.578
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229
Total Of 16 PAH's	N	2800	mg/kg	2.0	
Resorcinol	M	2920	mg/kg	0.020	
Phenol	M	2920	mg/kg	0.020	3.497
Cresols	M	2920	mg/kg	0.020	
Xylenols	M	2920	mg/kg	0.020	
1-Naphthol	N	2920	mg/kg	0.020	
Trimethylphenols	M	2920	mg/kg	0.020	
Total Phenols	M	2920	mg/kg	0.10	

	Fill Material Samples																														
	210202-91	210202-91	210202-91	210202-91	21-41336	22-16145	22-16145	22-24801	22-24801	22-24801	22-24801	22-24801	22-24801	22-18735	22-18735	22-18735	22-18735	21-41336	22-14900	22-14900	22-14900	22-14900	22-14900	22-16145	22-16145	22-16145	22-14900	22-14900
					1326719	1420842	1420843	1459500	1459501	1459502	1459503	1459504	1459505	1432301	1432302	1432303	1432304	1432307	1326714	1415349	1415350	1415358	1415359	1420844	1420845	1420846	1415356	1415357
	AK22-1	AK22-2	AL21-1	AL21-2	AM29-1	AM29-1	AM29-2	AM32-1	AM32-2	AN33-1	AN33-2	AN32-1	AN32-2	AO25-1	AP25-1	AP26-1	AO26-1	AO28-1	AO30-1	AQ27-1	AP27-1	AP22-1	AP22-2	AP30-1	AP30-2	AP31-1	AQ22-1	AQ22-2
	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	0.50-0.50	1.60-1.60	0.50-0.50	1.40-1.40	1.2	0.5	1.5	0.5	1.5	0.3	1.3	0.3	1.0	1.00	1.70	1.70	1.80	1.60	0.6	0.4	0.4	0.5	1.5	0.7	1.7	1.5	0.3	1.7
						0.5	1.5	-	-	-	-	-	-											0.7	1.7	1.5		
	1/29/2021	1/29/2021	1/29/2021	1/29/2021	19-Nov-2021	28-Apr-2022	28-Apr-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	29-Jun-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	19-Nov-2021	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	20-Apr-2022	20-Apr-2022
							NEW-ASB		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		COVENTRY		NEW-ASB		NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB
	-		-		-		-		-		-		-		-		-				-		-		-	-		-
	Not Detected	-	Detected	-	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected				No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected
			0.0203																									
12	15	20	11	12	8.7	14	5.8	5.1	9.4	2.6	1.4	10	8.3	6.9	10	7.4	9.1	10	10	6.1	10	14	8.6	5.3	7.1	6.4	13
Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Brown	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones
Loamy Sand	Silty Sand	Loamy Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Gravel	Gravel	Loam	Sand	Sand	Sand	Gravel	Gravel
11.3	11.6	8.81	9.39	> 12.0	11.1	10.7	11	9.5	11.1	10.3	8.9	10	> 12.0	9.4	11.8	9.2	9	12	11	10.8	10.4	10.4	> 12.0	10.2	11.5	10.7	10.9
5.06	1.73	3.41	2.09	1.5	1.4	0.9	0.5	0.9	0.9	1.1	1.6	1.7	0.9	8.3	1.4	< 0.50	< 0.50	1.2	< 0.50	< 0.50	1	1.3	2.7	< 0.50	< 0.50	< 0.50	< 0.50	1.8
<12	<12	<12	<12	< 0.50	< 0.50	< 0.50	1.5	0.93	3.9	0.68	0.86	1.6	0.58	28	1.4	5.4	0.86	< 0.50	8.6	2.7	10	5.3	< 0.50	< 0.50	< 0.50	6.9	6.2
220000	76400	109000	18500	22000	38000	31000	29000	28000	30000	11000	32000	28000	77000	100000	73000	54000	26000	23000	12000	11000	15000	14000	41000	15000	46000	16000	13000
12.2	7.92	10.2	<6	23	4.2	3.4	8.9	1.8	6.3	1.5	7.3	6.4	2.7	7.9	4.4	4	2.2	17	4.6	3.6	5.4	4.8	5.6	11	8.8	4.7	3.7
1.04	0.52	1.89	<0.2	< 0.10	0.36	< 0.10	0.19	0.2	0.27	0.23	0.39	0.24	0.18	0.26	0.23	0.28	0.14	0.15	< 0.10	< 0.10	0.41	0.73	0.58	0.25	0.38	0.22	0.1
<9	37.2	238	12	450	340	120	120	230	48	10	700	63	170	52	130	71	14	340	12	48	16	20	480	25	270	12	74
4060	2940	16900	1060	18000	17000	6200	120000	12000	3300	790	48000	4600	13000	3000	9700	4300	2000	13000	2400	3500	1300	2100	20000	1400	25000	1600	2800
20.7	19.6	26.3	17.8	61	23	21	22	12	14	2.8	23	15	18	16	15	10	4.6	50	13	45	15	15	27	16	46	11	7.4
5.69	<1	<1	<1	1.2	0.29	0.12	0.07	0.13	0.07	< 0.05	0.19	0.08	0.05	0.2	0.25	0.06	< 0.05	0.89	< 0.10	< 0.10	< 0.10	< 0.10	0.17	0.09	< 0.05	< 0.10	< 0.10
36.9	24.8	18.7	19.6	17	11	10	36	4.5	21	5.3	16	16	16	20	12	9.6	3.7	16	4.3	5.5	15	14	17	17	30	5.6	9.2
382	127	167	27	43	55	39	25	34	34	9.4	41	28	23	34	35	37	19	38	14	18	54	110	40	68	84	18	12
<10	<10	<10	<10	< 0.20	1.3	0.6	0.64	1.9	0.9	0.33	0.5	0.53	1.2	0.77	0.67	0.46	1.4	< 0.20	3.4	4.2	2.5	4.6	1.4	1.3	1.3	1.2	3.7
280	62.9	208	25.6	400	380	140	98	220	49	11	660	67	610	110	530	190	31	300	24	85	35	43	480	17	470	26	120
641	236	546	75.6	60	150	95	99	60	90	20	70	66	44	74	120	120	60	86	12	29	49	60	120	90	130	51	25
37.4	11.3	12	5.26	22	22	100	64	11	11	5.7	1.9	2.6	2.1	26	5.2	21	28	33	6	13	6.6	2.4	7.4	13	3.1	8.1	2.9
<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	8	14	20	< 1.0	< 1.0	< 1.0	48	7.8
<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	18	20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	56	20	19	< 1.0	< 1.0	< 1.0	110	21
4.25	1.27	6.33	<1	< 1.0	< 1.0	< 1.0	8.9	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	50	37	25	< 1.0	< 1.0	< 1.0	100	22
12.6	3.58	28	2.29	< 1.0	< 1.0	< 1.0	58	250	< 1.0	150	< 1.0	< 1.0	150	250	< 1.0	< 1.0	< 1.0	< 1.0	46	52	69	53	120	< 1.0	< 1.0	330	39
1.87	<1	2.02	<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
19	5.23	39.2	<5	< 5.0	< 5.0	< 5.0	85	300	< 5.0	150	< 5.0	< 5.0	150	250	< 5.0	< 5.0	< 5.0	< 5.0	79	170	140	120	120	< 5.0	< 5.0	590	90
<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
49.5	24.6	123	37.9	< 10	< 10	< 10	290	400	77	190	36	41	150	250	100	< 10	< 10	< 10	110	200	170	150	190	< 10	< 10	780	120
<180	<180	<180	<180	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.4	7.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<140	<140	<140	<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	2.3	2.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
<80	<80	<80	<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	< 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	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
0.232	0.329	0.0872	0.0859	< 0.10	< 0.10	< 0.10	2.9	0.35	0.76	< 0.10	< 0.10	0.28	1.7	< 0.10	15	24	1.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.54	< 0.10
0.085	0.0756	0.0373	0.0241	< 0.10	< 0.10	< 0.10	1.4	0.11	0.26	< 0.10	< 0.10	0.24	0.16	< 0.10	2.2	3.9	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.1	< 0.10
0.0229	0.0175	0.0161	<0.008	< 0.10	< 0.10	< 0.10	0.31	0.15	0.13	< 0.10	< 0.10	0.12	1.1	< 0.10	0.59	0.73	0.18	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.43	< 0.10
0.0622	0.0588	0.027	0.0141	< 0.10	< 0.10	< 0.10	0.89	0.12	0.18	< 0.10	< 0.10	0.19	0.5	< 0.10	2.4	2.6	0.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26	< 0.10
0.557	0.407	0.366	0.171	< 0.10	1.9	0.2	8.1	1.1	1.1	< 0.10	0.84	0.92	9.5	0.61	24	17	1.2	1.9	0.23	0.44	0.5	0.72	< 0.10	0.17	< 0.10	0.91	0.33
0.148	0.112	0.0885	0.0399	< 0.10	0.35	< 0.10	2.5	0.23	0.26	< 0.10	0.21	0.32	1.1	0.11	4.3	4.6	0.29	0.39	< 0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	0.16	< 0.10
1.2	0.596	0.672	0.264	0.83	2.8	1	20	1.6	2	< 0.10	0.95	1.5	13	0.79	34	26	1.5	2.2	0.2	0.29	0.41	0.73	< 0.10	0.76	< 0.10	0.63	0.15
0.969	0.468	0.55	0.215	0.7	2.3	1	14	1.3	1.6	< 0.10	0.88	1.6	11	0.65	24	18	1.3	1.6	0.21	0.2	0.3	0.61	< 0.10	0.75	< 0.10	0.51	0.13
0.669	0.32	0.361	0.143	0.38	1.2	0.72	9.3	0.9	1.1	< 0.10	0.56	1	6.7	0.3	12	11	0.69	0.84	< 0.10	0.11	0.21	0.42	< 0.10	0.53	< 0.10	0.16	< 0.10
0.709	0.359	0.391	0.156	0.52	1.4	0.73	9.2	0.86	1	< 0.10	0.65	0.92	8	0.34	12	12	0.67	1.2	< 0.10	0.17	0.22	0.34	< 0.10	0.49	< 0.10	0.27	< 0.10
0.977	0.474	0.591	0.235	1	1.5	1.1	12	1.4	1.8	< 0.10	< 0.10	1.5	12	0.58	16	15	0.98	1.7	< 0.10	< 0.10	0.23	0.51	< 0.10	0.75	< 0.10	0.36	< 0.10
0.3	0.136	0.208	0.0709	0.31	0.57	0.4	4.1	0.39	0.66	< 0.10	< 0.10	0.5	4.7	0.21	5.4	5.2	0.32	0.58	< 0.10	< 0.10	0.11	0.17	< 0.10	0.29	< 0.10	0.14	< 0.10
0.568	0.282	0.371	0.138	0.7	1.3	0.91	8.2	0.91	1.2	< 0.10	< 0.10	0.94	11	0.34	12	10	0.6	0.98	< 0.10	< 0.10	0.16	0.37	< 0.10	0.67	< 0.10	0.22	< 0.10
0.434	0.229	0.35	0.143	< 0.10	0.8	0.85	7.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.8	0.35	8.9	7.6	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.43	< 0.10	0.17	< 0.10
0.103	0.0511	0.07	0.0265	< 0.10	0.18	0.26	1.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4	0.1	1.8	1.5	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10
0.399	0.211	0.318	0.132	< 0.10	0.81	0.92	6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.9	0.35	8.1	6.7	0.53	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.49	< 0.10	0.19	< 0.10
7.43	4.13	4.5	1.86	4.4	15	8.1	110	9.4	12	< 2.0	4.1	10	98	4.7	180	170	11	11	< 2.0	< 2.0	2.1	4	< 2.0	5.4	< 2.0	5.1	< 2.0
				< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
<0.015	<0.015	<0.015	<0.015	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
				< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
				< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
<0.035	<0.035	<0.035	<0.035	< 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

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:													
Quotation No.: Q21-24056	Chemtest Sample ID.:													
Project: P18-669						Fill Material Samples								
Client: Rodgers Leask Environmental	Job No.:				Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	21-41336	22-14900	22-18735	21-41336	21-41336	21-41336	22-20747	22-20747	22-20750
Quotation No.: Q21-24056	Sample ID.:					1326709	1415349	1432310	1326711	1326712	1326713	1441650	1441651	1441657
	Client Sample Ref.:					AQ31-1	AQ27-1	AQ28-1	AQ30-1	AQ30-2	AQ30-3	AS35-1	AS35-2	AR35-2
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					1.0	0.4	1.00	0.5	1.7	2.8			
	Bottom Depth (m):											0.30	2.00	1.30
	Date Sampled:						20-Apr-2022	18-May-2022	19-Nov-2021	19-Nov-2021	19-Nov-2021	31-May-2022	31-May-2022	31-May-2022
	Asbestos Lab:					19-Nov-2021		DURHAM		COVENTRY			COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A		-		-	Fibres/Clumps		-		-	-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	Chrysotile		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected
Asbestos Quantification Total			%						<0.001					
Moisture	N	2030	%	0.020		4.3	10	8.4	12	17	20	6.2	19	9.2
Soil Colour	N	2040		N/A		Brown	Black	Brown	Brown	Black	Black	Brown	Black	Brown
Other Material	N	2040		N/A		Stones	Stones	Roots and Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A		Sand	Gravel	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0		> 12.0	11	8.9	11.6	11.2	11.2	11.3	10.5	10.6
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	< 0.50	< 0.50	< 0.50	4.5	2.4	< 0.50	1.3	2.1	3.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	0.56	8.6	1.4	< 0.50	0.61	1.5	1.3	1.6	2.7
Iron (Total)	N	2430	mg/kg	100	349148.01	21000	12000	53000	23000	23000	14000	24000	23000	22000
Arsenic	M	2450	mg/kg	1.0	2902.688	43	4.6	1.9	25	22	12	7.9	19	15
Cadmium	M	2450	mg/kg	0.10	83.661	< 0.10	< 0.10	< 0.10	0.59	1.1	2.5	0.57	0.73	0.42
Chromium	M	2450	mg/kg	1.0	10806.907	1200	12	92	410	570	86	82	150	41
Manganese	M	2450	mg/kg	5.0	38175.69	35000	2400	3900	18000	11000	2300	4200	5700	2100
Copper	M	2450	mg/kg	0.50	516.883	290	13	8.2	51	73	34	20	83	35
Mercury	M	2450	mg/kg	0.10	150.809	1.9	< 0.10	< 0.05	1.4	0.85	0.24	0.26	0.38	0.21
Nickel	M	2450	mg/kg	0.50	13188.601	26	4.3	5.3	32	150	15	17	33	20
Lead	M	2450	mg/kg	0.50	18032.071	80	14	13	78	110	160	63	160	120
Selenium	M	2450	mg/kg	0.20	804.305	< 0.20	3.4	0.61	< 0.20	< 0.20	< 0.20	1	2.4	1.2
Vanadium	U	2450	mg/kg	5.0	1840.198	800	24	82	390	250	82	81	110	46
Zinc	M	2450	mg/kg	0.50	157599.516	82	12	43	110	120	190	140	240	220
Organic Matter	M	2625	%	0.40		2.8	6	64	9	29	59	4.7	28	15
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	< 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	411.626	< 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	3254.98	< 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	25838.23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	< 1.0	46	< 1.0	230	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	< 1.0	< 1.0	39	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	79	39	230	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	< 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	202.89	< 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	164.594	< 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	259.933	< 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	517.061	< 1.0	< 1.0	190	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	< 1.0	< 1.0	3400	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	< 1.0	29	4500	210	< 1.0	< 1.0	< 1.0	< 1.0	12
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	< 1.0	5.7	810	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	35	8900	210	< 5.0	< 5.0	< 5.0	< 5.0	12
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	110	9000	440	< 10	< 10	< 10	< 10	16
Benzene	M	2760	µg/kg	1.0	4358	< 1.0	3.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	147182	< 1.0	2.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	92030	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	31.45	< 0.10	< 0.10	4	< 0.10	< 0.10	< 0.10	0.38	0.67	0.85
Acenaphthylene	N	2800	mg/kg	0.10	19.168	< 0.10	< 0.10	0.34	< 0.10	< 0.10	< 0.10	0.36	0.1	2
Acenaphthene	M	2800	mg/kg	0.10	34.073	< 0.10	< 0.10	0.34	< 0.10	< 0.10	< 0.10	< 0.10	0.11	0.16
Fluorene	M	2800	mg/kg	0.10	31.077	< 0.10	< 0.10	0.35	< 0.10	< 0.10	< 0.10	0.16	< 0.10	0.36
Phenanthrene	M	2800	mg/kg	0.10	31.077	0.24	0.23	2.9	< 0.10	1.6	1.4	2.3	0.67	4
Anthracene	M	2800	mg/kg	0.10	39.119	0.2	< 0.10	0.66	< 0.10	0.27	0.41	0.59	0.14	1.6
Fluoranthene	M	2800	mg/kg	0.10	7.614	0.47	0.2	3.7	1.3	2.2	1.8	5.7	1.1	14
Pyrene	M	2800	mg/kg	0.10	87.557	0.21	0.21	3	1.5	1.7	1.6	4.3	0.77	11
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	0.23	< 0.10	2.1	0.97	1.1	1.1	2.4	0.43	7.3
Chrysene	M	2800	mg/kg	0.10	711.578	0.4	< 0.10	2.4	1.1	1.3	0.99	2.6	0.49	6.7
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	0.24	< 0.10	3.7	2.2	1.8	1.4	3.1	0.73	14
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	0.17	< 0.10	1.1	0.66	0.58	0.47	1.1	0.24	4.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	0.27	< 0.10	2.7	1.3	1.2	0.82	2.1	0.41	11
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	0.37	< 0.10	2.1	< 0.10	1.1	0.43	1.7	0.2	10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	0.42	< 0.10	0.41	< 0.10	0.3	0.1	0.35	0.1	2
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	0.38	< 0.10	2.2	< 0.10	0.99	0.58	1.6	0.27	8.6
Total Of 16 PAH's	N	2800	mg/kg	2.0		3.6	< 2.0	32	9	14	11	29	6.4	98
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	3.497	< 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

			Fill Material Samples					Fill Material Samples	
Job No.:	22-20750	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Sample ID.:	1441658	1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348
Client Sample Ref.:	AR35-1	AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2
Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):		0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5
Bottom Depth (m):	0.60								
Date Sampled:	31-May-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
Asbestos Lab:		NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB
Determinand									
ACM Type		-			-		-		-
Asbestos Identification		No Asbestos Detected			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Asbestos Quantification Total									
Moisture	7.1	5.6	13	9	16	3.9	12	8.4	15
Soil Colour	Brown	Brown	Brown	Black	Black	Brown	Black	Brown	Black
Other Material	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	Sand	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	9.4	10.4	10.5	11	10.3	10.4	9.9	11.4	10.9
Cyanide (Total)	3.7	< 0.50	< 0.50	3	< 0.50	0.6	< 0.50	1.2	< 0.50
Ammoniacal Nitrogen	1.6	1.6	0.93	0.72	1.2	4.9	4.3	1.3	2.1
Iron (Total)	23000	34000	35000	32000	41000	26000	37000	28000	25000
Arsenic	7.1	5.7	4.2	4.3	11	5.8	8.3	4.6	4.9
Cadmium	0.6	0.7	0.2	0.2	0.25	0.22	0.46	0.24	0.17
Chromium	54	78	52	240	43	43	21	190	25
Manganese	3200	6500	5500	12000	3300	4400	2900	11000	2000
Copper	23	29	55	20	19	9	15	21	14
Mercury	0.26	0.22	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	18	24	41	16	16	9.4	10	13	9.4
Lead	150	37	26	19	71	21	63	22	40
Selenium	1.2	2.7	2.6	1.8	0.94	2.3	1.5	2.5	1.9
Vanadium	46	160	140	450	82	110	46	320	50
Zinc	280	110	48	61	170	73	140	52	50
Organic Matter	13	1.9	1.7	6.4	100	14	28	8.5	66
Aliphatic TPH >C5-C6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0
Aliphatic TPH >C16-C21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0
Aliphatic TPH >C21-C35	< 1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	120	540	< 1.0
Aliphatic TPH >C35-C44	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	< 5.0	< 5.0	12	< 5.0	< 5.0	< 5.0	150	540	< 5.0
Aromatic TPH >C5-C7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	3.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	120	< 1.0	350	< 1.0	170	< 1.0	210	160	< 1.0
Aromatic TPH >C35-C44	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	130	< 5.0	350	< 5.0	170	< 5.0	210	160	< 5.0
Total Petroleum Hydrocarbons	130	< 10	360	< 10	170	< 10	360	690	< 10
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	1.8	2.5	3.7
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	2	< 1.0	2	1.6	2.8
Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	1.2	< 0.10	< 0.10	< 0.10	2.1	< 0.10	1.5	< 0.10	< 0.10
Acenaphthylene	4.2	< 0.10	< 0.10	< 0.10	0.13	< 0.10	0.1	< 0.10	< 0.10
Acenaphthene	0.18	< 0.10	< 0.10	< 0.10	0.44	< 0.10	0.2	< 0.10	< 0.10
Fluorene	0.34	< 0.10	< 0.10	< 0.10	0.78	< 0.10	0.25	< 0.10	< 0.10
Phenanthrene	2.6	0.24	0.12	0.47	4.5	0.9	1	1.1	1.3
Anthracene	1.6	< 0.10	< 0.10	< 0.10	1	0.18	0.18	0.2	0.25
Fluoranthene	15	0.5	0.25	1.3	5.4	0.99	0.88	2.5	0.85
Pyrene	14	0.6	0.22	1.4	4	0.8	0.78	2.4	0.79
Benzo[a]anthracene	11	0.33	0.14	0.64	4.3	0.42	0.37	1.9	0.5
Chrysene	11	0.38	0.14	0.88	3.8	0.4	0.41	2.4	0.49
Benzo[b]fluoranthene	28	0.68	0.29	1.4	7.3	0.83	0.6	3.9	0.74
Benzo[k]fluoranthene	9.2	0.18	0.12	0.51	2.4	0.22	0.2	1.4	0.15
Benzo[a]pyrene	22	0.57	0.26	0.89	5.6	0.66	0.38	2.8	0.5
Indeno(1,2,3-c,d)Pyrene	22	0.41	< 0.10	0.76	3.4	0.57	0.3	2	0.27
Dibenz(a,h)Anthracene	3.3	< 0.10	< 0.10	0.14	1.2	0.14	0.11	0.38	0.11
Benzo[g,h,i]perylene	18	0.4	< 0.10	0.73	3.2	0.63	0.41	1.9	0.34
Total Of 16 PAH's	160	4.3	< 2.0	9.1	50	6.7	7.7	23	6.3
Resorcinol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

				Fill Material Samples					Fill Material Samples
Job No.:	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Sample ID.:	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703
Client Sample Ref.:	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1
Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5
Bottom Depth (m):									
Date Sampled:	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021
Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand									
ACM Type	-		-		-		-		-
Asbestos Identification	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Asbestos Quantification Total									
Moisture	9.4	13	17	10	8.4	7.7	24	16	9.6
Soil Colour	Black	Black	Black	Brown	Brown	Brown	Black	Brown	Brown
Other Material	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	10.4	10.3	10.7	10.3	10.5	11.8	11.5	10.2	10.3
Cyanide (Total)	2.7	1.6	20	22	1.7	1.9	< 0.50	< 0.50	0.5
Ammoniacal Nitrogen	11	7.8	6	14	6.9	4.4	4.2	16	1.9
Iron (Total)	24000	26000	26000	25000	26000	23000	20000	25000	26000
Arsenic	43	35	19	17	14	22	3	14	18
Cadmium	0.69	0.4	0.36	1.3	0.25	0.84	< 0.10	0.79	0.33
Chromium	110	110	130	79	74	590	44	63	49
Manganese	12000	11000	6400	5400	5100	26000	1400	2500	4600
Copper	95	95	67	36	130	71	120	180	26
Mercury	0.66	0.85	0.89	0.27	0.24	2.7	0.24	0.19	0.26
Nickel	46	47	34	37	46	58	11	36	51
Lead	140	140	310	150	61	52	20	72	87
Selenium	< 0.20	0.28	0.33	0.39	< 0.20	< 0.20	0.63	0.54	0.23
Vanadium	140	120	100	110	120	1400	94	100	46
Zinc	200	160	160	300	150	91	27	140	150
Organic Matter	24	59	64	17	98	2.8	100	47	40
Aliphatic TPH >C5-C6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	< 1.0	21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	< 1.0	36	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	< 1.0	88	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	< 10	150	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	< 0.10	< 0.10	1.8	3.2	< 0.10	< 0.10	0.67	< 0.10	< 0.10
Acenaphthylene	< 0.10	< 0.10	0.66	0.67	< 0.10	< 0.10	0.13	< 0.10	< 0.10
Acenaphthene	< 0.10	< 0.10	0.24	0.28	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	< 0.10	< 0.10	0.32	0.52	< 0.10	< 0.10	0.47	< 0.10	< 0.10
Phenanthrene	0.71	2.5	4.1	3.8	1.1	< 0.10	5.7	1.4	0.84
Anthracene	0.22	1	0.91	1.1	0.19	< 0.10	0.88	0.22	0.32
Fluoranthene	1.1	4.1	6.4	6.6	2	0.98	3.1	1.2	1.9
Pyrene	1	3.2	4.5	4.5	1.3	0.94	1.9	0.82	1.4
Benzo[a]anthracene	0.74	2.2	3.2	3.2	1.3	0.85	1.7	0.77	1.4
Chrysene	0.7	2.5	3.4	2.8	1.3	1	2	0.9	1.6
Benzo[b]fluoranthene	1.7	4.1	5.2	4.8	1.3	1.7	1.9	1.1	3.1
Benzo[k]fluoranthene	0.49	1.1	1.4	1.4	0.73	0.77	0.6	0.38	0.87
Benzo[a]pyrene	0.85	2.8	2.8	3.1	1.2	1.4	1	0.72	2.1
Indeno(1,2,3-c,d)Pyrene	0.72	2.9	2.8	2.4	1	1	< 0.10	< 0.10	2.1
Dibenz(a,h)Anthracene	0.22	0.43	1.1	0.83	0.24	< 0.10	< 0.10	< 0.10	0.48
Benzo[g,h,i]perylene	0.91	1.9	2.5	2.3	0.84	0.78	< 0.10	< 0.10	1.6
Total Of 16 PAH's	9.4	29	41	42	13	9.4	20	7.5	18
Resorcinol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:				
Quotation No.: Q21-24056	Chemtest Sample ID.:				
Project: P18-669					
Client: Rodgers Leask Environmental	Job No.:				
Quotation No.: Q21-24056	Sample ID.:				
	Client Sample Ref.:				
	Sample Type:				
	Top Depth (m):				
	Bottom Depth (m):				
	Date Sampled:				
	Asbestos Lab:				

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Asbestos Quantification Total			%		
Moisture	N	2030	%	0.020	
Soil Colour	N	2040		N/A	
Other Material	N	2040		N/A	
Soil Texture	N	2040		N/A	
pH	M	2010		4.0	
Cyanide (Total)	M	2300	mg/kg	0.50	2.313
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983
Iron (Total)	N	2430	mg/kg	100	349148.01
Arsenic	M	2450	mg/kg	1.0	2902.688
Cadmium	M	2450	mg/kg	0.10	83.661
Chromium	M	2450	mg/kg	1.0	10806.907
Manganese	M	2450	mg/kg	5.0	38175.69
Copper	M	2450	mg/kg	0.50	516.883
Mercury	M	2450	mg/kg	0.10	150.809
Nickel	M	2450	mg/kg	0.50	13188.601
Lead	M	2450	mg/kg	0.50	18032.071
Selenium	M	2450	mg/kg	0.20	804.305
Vanadium	U	2450	mg/kg	5.0	1840.198
Zinc	M	2450	mg/kg	0.50	157599.516
Organic Matter	M	2625	%	0.40	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	4358
Toluene	M	2760	µg/kg	1.0	147182
Ethylbenzene	M	2760	µg/kg	1.0	92030
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	31.45
Acenaphthylene	N	2800	mg/kg	0.10	19.168
Acenaphthene	M	2800	mg/kg	0.10	34.073
Fluorene	M	2800	mg/kg	0.10	31.077
Phenanthrene	M	2800	mg/kg	0.10	31.077
Anthracene	M	2800	mg/kg	0.10	39.119
Fluoranthene	M	2800	mg/kg	0.10	7.614
Pyrene	M	2800	mg/kg	0.10	87.557
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38
Chrysene	M	2800	mg/kg	0.10	711.578
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229
Total Of 16 PAH's	N	2800	mg/kg	2.0	
Resorcinol	M	2920	mg/kg	0.020	
Phenol	M	2920	mg/kg	0.020	3.497
Cresols	M	2920	mg/kg	0.020	
Xylenols	M	2920	mg/kg	0.020	
1-Naphthol	N	2920	mg/kg	0.020	
Trimethylphenols	M	2920	mg/kg	0.020	
Total Phenols	M	2920	mg/kg	0.10	

	Fill Material Samples																									
21-41336	21-41336	21-41336	21-41336	22-21373	22-21373	22-21373	22-21373	22-21373	22-20747	22-20747	22-20747	22-29945	22-20752	22-20752	22-20752	22-20752	22-26760	22-26760	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	210130-32	210130-32
1326704	1326705	1326706	1326707	1444540	1444541	1444542	1444543	1444544	1441648	1441650	1441651	1482831	1441669	1441670	1441673	1441675	1468354	1468355	1440206	1440207	1440208	1440209	1440210	1440211		
AT31-2	AS31-1	AS31-2	AR31-1	AU33-1	AT33-1	AT33-2	AS33-1	AS33-2	AS34-1	AS35-1	AS35-2	AT32-1	AT35-1	AT35-2	AT34-2	AU36-1	AV31-1	AV32-1	AV35-1	AV35-2	AV36-1	AV36-2	AV37-1	AV37-2	AJ27-1	AK34-1
SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID
1.8	0.6	1.7	0.3	0.90	1.20	2.00	1.20	2.00				1.3					0.70	1.00							0.70-0.70	0.80-0.80
									0.40	0.30	2.00		0.5	1.4	1.5	0.7	0.70	1.00	1.00	2.00	0.30	1.30	0.50	1.60		
19-Nov-2021	19-Nov-2021	19-Nov-2021	19-Nov-2021	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	07-Jun-2022	31-May-2022	31-May-2022	31-May-2022	04-Aug-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	13-Jul-2022	13-Jul-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	1/29/2021	1/29/2021
COVENTRY		COVENTRY		DURHAM		DURHAM		DURHAM			COVENTRY	COVENTRY	NEW-ASB		NEW-ASB	NEW-ASB	DURHAM	DURHAM	DURHAM		DURHAM		DURHAM			
-	-		-	-		-		-			-	-	-		-	-	-	-	-		-		-		-	
	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			-
8.2	10	9.7	5	6.5	7.4	11	13	13	5.8	6.2	19	11	10	13	9.5	6.4	2.9	4.1	8.8	9.6	12	7.2	11	6.8	14	11
Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Dark Brown	Dark Brown
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	None
Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand		
10.2	11.8	11.2	10.9	11	10.5	10.8	12	9.7	10.5	11.3	10.5	9.1	> 12.0	> 12.0	11.2	11.8	9.6	10.1	10.7	10.6	10	10.3	10.9	11	11.9	9.51
1.3	2.4	3.4	< 0.50	4.5	2.6	3.5	1.8	1.5	14	1.3	2.1	1.4	14	5.4	2.7	18	1.2	< 0.50	5.2	3.1	8	< 0.50	10	< 0.50	<1	<1
1.4	< 0.50	0.74	0.75	1.2	4.7	0.86	71	1.3	1.4	1.3	1.6	27	1	0.65	0.76	1.1	< 0.50	< 0.50	0.78	0.64	0.58	4.4	1	< 0.50	<12	<12
22000	22000	23000	8900	25000	18000	19000	19000	21000	26000	24000	23000	88000	23000	22000	12000	25000	110000	83000	4900	8700	9000	6100	7800	12000	133000	-
23	26	22	55	72	4	14	5.5	22	13	7.9	19	11	12	8.8	6.9	5.2	8.2	17	1.9	2	2.1	1.3	2.3	1.2	<6	13.6
0.24	0.15	0.38	0.82	0.68	0.42	0.22	0.14	0.45	0.54	0.57	0.73	2.1	1.2	0.77	0.22	0.25	0.14	0.56	0.35	0.24	0.37	0.29	< 0.10	0.26	1.92	1.49
82	670	120	10	66	11	11	22	12	36	82	150	32	270	110	34	89	28	43	12	22	22	12	35	55	374	119
6100	28000	7300	1800	17000	2000	1300	2600	510	19000	4200	5700	2800	9900	5000	2500	4900	2200	15000	2000	3300	2800	3000	2600	3900	29500	8330
31	130	51	76	30	7	27	8.9	38	16	20	83	29	46	37	16	14	13	26	6.4	6.1	11	6	5.4	5.3	27.7	23.3
0.21	4.3	0.53	< 0.10	0.34	< 0.05	0.06	< 0.05	0.81	0.13	0.26	0.38	0.13	0.29	0.17	0.05	0.17	< 0.05	0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	<1	<1
17	35	25	10	32	7	16	6.8	23	24	17	33	22	29	38	16	11	11	24	3.6	3.6	5.9	3.7	3.9	3.7	15.3	26.5
140	43	65	21	25	26	50	20	41	41	63	160	200	170	80	22	32	44	55	33	29	38	34	12	25	53.6	67.5
< 0.20	< 0.20	< 0.20	< 0.20	2.1	2.2	2.3	2.3	5.4	2.3	1	2.4	1.6	0.6	0.51	2.7	0.44	1.2	0.96	0.48	0.29	0.57	0.29	0.81	0.27	14	<10
82	1200	220	24	79	29	26	48	22	78	81	110	48	170	76	36	87	40	80	17	27	26	15	35	55	968	134
180	77	83	60	85	41	41	42	76	170	140	240	380	560	210	48	130	74	130	76	110	130	140	25	46	84.5	196
21	9	11	2.2	13	4.8	15	5	24	3.8	4.7	28	24	8.3	7.8	3.3	2.9	67	47	5	5.3	11	6.6	4.7	2.1	1.31	10.1
< 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	<0.01	<0.01
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	7.3	< 1.0	< 1.0	19	<1	<1
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	32	8.8	< 1.0	< 1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	18	<1	<1
< 1.0	1200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	84	19	< 1.0	< 1.0	< 1.0	< 1.0	16	< 1.0	< 1.0	64	<1	1.1
< 1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3000	< 1.0	< 1.0	72	< 1.0	< 1.0	140	< 1.0	< 1.0	140	7.44	8.1
< 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	630	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.07	<1
< 5.0	1400	< 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	3800	28	< 5.0	72	< 5.0	170	< 5.0	< 5.0	240	11.5	9.88	
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1	<1
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	4.41	<1
< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	500	< 1.0	< 1.0	57	< 1.0	< 1.0	84	< 1.0	< 1.0	120	28	10.3
< 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	33	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<1	1.07
< 5.0	19	< 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	530	< 5.0	< 5.0	57	< 5.0	86	< 5.0	< 5.0	130	33.5	11.8	
< 10	1400	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	4300	28	< 10	130	< 10	260	< 10	< 10	370	45	21.6	
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<180	<180
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<140	<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	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<80	<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	< 1.0	< 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	<200
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	<200
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	<200
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.38	0.67	< 0.10	1.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.43	0.62	< 0.10	0.59	0.021	0.0599
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.36	0.1	< 0.10	0.59	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.63	< 0.10	2.7	<0.012	0.0461
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.15	< 0.10	0.34	0.0429	<0.008
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16	< 0.10	< 0.10	0.56	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	0.21	< 0.10	0.4	0.0191	<0.01
0.48	< 0.10	3.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4	2.3	0.67	0.73	3.1	1.2	0.37	0.48	0.86	1.4	1.4	1.1	0.86	1.2	0.24	2.9	0.458	0.12
0.14	< 0.10	0.83	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	0.59	0.14	0.15	0.82	0.44	0.21	0.55	0.16	0.26	0.48	1.5	0.38	0.6	< 0.10	4.3	0.112	0.0336
0.68	0.77	6.1	< 0.10	0.34	< 0.10	0.24	0.26	< 0.10	2.1	5.7	1.1	0.57	7	3.2	0.69	1.9	0.64	0.92	3.5	6.8	2.9	3.5	0.2	23	1.25	0.301
0.51	0.75	4.6	< 0.10	0.4	< 0.10	0.21	0.24	< 0.10	1.5	4.3	0.77	0.44	7.1	3.2	0.62	2.3	0.56	0.75	2.9	6.7	2.4	3.3	0.19	24	1.19	0.259
0.48	0.7	2.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.87	2.4	0.43	< 0.10	4	2.1	< 0.10	1.8	0.42	0.6	2	4.7	1.8	2.9	0.14	15	0.715	0.184
0.65	0.68	1.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88	2.6	0.49	< 0.10	4.2	2	< 0.10	2	0.32	0.65	1.8	6.4	2	3.9	0.17	21	0.828	0.157
1	1.2	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.5	3.1	0.73	< 0.10	7.7	3.6	< 0.10	4.4	0.5	0.77	3.3	9.2	2.3	5.8	0.22	33	1.19	0.388
0.27	0.49	0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.53	1.1	0.24	< 0.10	2.7	1.3	< 0.10	1.5	0.16	0.21	1.2	2.8	0.8	1.8	0.12	11	0.376	0.104
0.81	1	1.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.89	2.1	0.41	< 0.10	6.1	2.5	< 0.10	3.6	0.38	0.49	2.5	7.1	1.9	4.5	0.16	26	0.775	0.195
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.68	1.7	0.2	< 0.10	4.9	2.2	< 0.10	< 0.10	< 0.10	0.45	2.4	6.5	1.4	4.2	< 0.10	23	0.618	0.221
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.35	0.1	< 0.10	0.91	0.63	< 0.10	< 0.10	< 0.10	0.17	0.45	1	0.35	0.67	< 0.10	3.9	0.103	0.0344
< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.78	1.6	0.27	< 0.10	4.4	2	< 0.10	< 0.10	< 0.10	0.45	2.1	5.8	1.4	4	< 0.10	22	0.652	0.169
5	5.6	23	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	12	29	6.4	< 2.0	56	24	< 2.0	19	4	7.1	24	60	19	38	< 2.0	210	8.35	2.27
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.88	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.01	<0.01
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	1.1	< 0.020	< 0.020	<0.01	<0.01
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.015	<0.015
< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
< 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	0.88	< 0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10	<0.035	<0.035

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:																																
Quotation No.: Q21-24056	Chemtest Sample ID.:																																
Project: P18-669						Fill Material Samples					Fill Material								Fill Material Samples					Fill Material Samples									Fill Material Sam
Client: Rodgers Leask Environmental	Job No.:					210130-32	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27	210114-154	210114-154	210115-27	210115-27	210114-156	210114-156	22-16610	22-16610	22-16610	22-16610	22-16610	22-16661	22-16661	22-16610	22-23680	22-23680	22-23919	22-23919	22-23919	22-24434	22-24434	22-24434
Quotation No.: Q21-24056	Sample ID.:																		1422842	1422843	1422844	1422845	1422846	1423055	1423056	1422841	1454849	1454850	1455829	1455830	1455831	1458085	1458086	1458087
	Client Sample Ref.:				Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	AK34-2	AN23-1	AN23-2	AO27-1	AO27-2	AO29-1	AO29-2	AQ21-1	AQ21-2	AQ24-1	AQ24-2	AT29-1	AT29-2	R147-1	R147-2	R146-1	R148-1	R148-2	R159-1	R159-2	R162-1	R164-1	R164-2	R164-3	R164-4	3CP2-2	R164-5	R164-6	R164-7
	Sample Type:					SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					1.60-1.60	0.20-0.20	1.50-1.50	0.60-0.60	1.20-1.20	0.50-0.50	1.50-1.50	0.40-0.40	1.90-1.90	0.20-0.20	1.50-1.50	0.50-0.50	1.10-1.10									0.20	0.20	0.20	0.20	0.20	-	-	-
	Bottom Depth (m):																										0.20	0.20	0.20	0.20	0.20	-	-	-
	Date Sampled:					1/29/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	11/01/2021	11/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	22-Jun-2022	27-Jun-2022	27-Jun-2022	27-Jun-2022
	Asbestos Lab:																		DURHAM		DURHAM	DURHAM	DURHAM	COVENTRY		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																													
ACM Type	U	2192		N/A															-		-	-	-	-		-		-		-		-	-
Asbestos Identification	U	2192		N/A		Not Detected	Not Detected	-	Not Detected	-	Not Detected	-	-	Not Detected	Not Detected	-	Not Detected	-	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 Quantification Total			%			-	-	-	-	-	-	-	-	-	-	-	-	-																
Moisture	N	2030	%	0.020		13	5.8	8.2	9.3	7	7.4	6.5	11	16	16	5.5	12	24	11	9.6	6.1	8.9	6.2	6	6.9	9.9	7.2	7.4	4.8	6.2	13	0.58	2.4	0.51
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Grey	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A		Vegetation	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots	Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Roots and Stones	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A															Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Loam	Loam	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0		10.2	12	12.7	11.4	11.9	8.92	12.6	9.35	9.8	10.7	11.8	10.8	10.4	8.8	8.8	8.6	8.6	8.6	8.5	8.8	8.7	7.7	7.5	6.5	6.5	7.7	11.1	10.4	9.6
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	<1	<1	<1	<1	<1	<1	<1	3.73	<1	<1	<1	<1	<1	< 0.50	0.5	< 0.50	< 0.50	0.5	< 0.50	< 0.50	0.7	15	12	2.4	1.8	0.9	2	13	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	4.3	4.5	7.2	7.8	66	2.3	3.9	9.3	3.2	2.6	2.9	2.6	6.9	4.3	4.1	3.7
Iron (Total)	N	2430	mg/kg	100	349148.01	101000	159000	139000	107000	430000	140000	140000	230000	185000	116000	356000	32600	23900	39000	32000	44000	27000	28000	57000	45000	37000	26000	26000	25000	24000	26000	20000	14000	19000
Arsenic	M	2450	mg/kg	1.0	2902.688	15.9	<6	<6	8.95	7.22	9.67	<6	16.7	14	<60	11	4.22	5.02	7.2	4.8	7.5	12	6	21	12	31	5.7	16	7	12	10	7	6.7	8.3
Cadmium	M	2450	mg/kg	0.10	83.661	1.34	0.477	<0.2	0.893	<0.2	1.81	0.401	<0.2	<0.2	<2	<0.2	0.147	<0.02	0.91	0.52	0.47	0.26	0.18	0.15	0.51	0.61	0.83	1.1	0.71	0.52	0.56	0.55	1	0.25
Chromium	M	2450	mg/kg	1.0	10806.907	33.8	841	376	131	39.8	456	802	<9	<9	291	28.6	25.6	8.05	100	49	97	22	19	12	100	51	49	85	240	420	39	210	54	85
Manganese	M	2450	mg/kg	5.0	38175.69	6690	33700	34500	11600	6230	23400	38000	4830	3160	16500	6350	5800	1800	4900	2400	4800	920	1000	7000	5500	6400	3000	4900	8500	14000	2400	8300	2900	3800
Copper	M	2450	mg/kg	0.50	516.883	20.2	<14	26.1	79.3	<14	81.4	<14	31.6	21.5	<140	16.8	6.17	17.8	23	15	20	17	11	70	27	27	22	39	17	21	18	19	16	13
Mercury	M	2450	mg/kg	0.10	150.809	<1	<1.4	<1.4	<1.4	1.84	<1.4	<1.4	2.56	<1.4	<14	<1.4	<0.14	<0.14	0.32	0.23	0.25	0.21	0.2	4.5	0.32	0.28	0.31	0.35	0.11	0.12	0.23	0.09	0.2	0.05
Nickel	M	2450	mg/kg	0.50	13188.601	27.2	9.88	20.6	31.2	18.1	29.7	7.31	58.4	35	155	35.2	4.84	8.34	17	11	19	12	12	7.1	25	25	22	27	15	15	18	17	22	19
Lead	M	2450	mg/kg	0.50	18032.071	44.3	7.35	14.9	135	26.3	165	7.04	160	110	84.8	17.6	22.5	16.2	190	72	68	26	33	58	58	57	130	160	60	69	59	72	100	35
Selenium	M	2450	mg/kg	0.20	804.305	<10	18.6	24	<10	<10	10.1	21.7	<10	<10	<100	<10	4.19	1.3	1.5	1.2	1.6	1.4	1.2	1.3	2.3	1.4	0.97	1.5	1.5	2.7	1.6	2.2	0.89	1.9
Vanadium	U	2450	mg/kg	5.0	1840.198	53.6	839	1800	396	325	419	681	88.4	72.2	696	235	51.5	26.9	160	88	120	28	25	19	76	80	58	91	170	290	74	170	63	75
Zinc	M	2450	mg/kg	0.50	157599.516	120	75.2	51.4	764	191	531	44.5	483	347	207	186	49.7	46.3	500	220	170	48	62	64	170	150	330	350	250	230	250	300	280	130
Organic Matter	M	2625	%	0.40		4.14	3.64	1.11	13.6	2.5	5.14	20.5	12.9	4.21	5.65	1.14	22.1	98.8	13	31	28	38	10	1.5	9	24	9	9.1	6.5	6.4	10	11	9	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	411.626	<0.01	<0.01	0.0229	<0.01	<0.01	<0.01	0.0353	<0.01	0.0155	0.0828	0.0212	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	3254.98	<0.01	<0.01	0.0294	<0.01	<0.01	<0.01	0.0514	<0.01	0.0286	0.116	0.037	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	25838.23	<1	<1	<1	<1	<1	<1	<1	<1	<1	18.8	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	<1	<1	2.92	1.25	1.23	<1	5.39	<1	<1	161	13.4	2.45	7.05	11	10	10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	32	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	<1	3.07	14	6.11	51.2	5.81	17.3	7.11	1.11	179	22.5	15	23.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	20	25	< 1.0	< 1.0	14	< 1.0	59	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	6.57	22.8	108	21.1	9.89	16.5	53.3	11	5.21	150	20.2	98.8	35.5	230	140	60	< 1.0	< 1.0	< 1.0	200	< 1.0	170	240	< 1.0	4.2	< 1.0	< 1.0	210	210
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	<1	7.17	52.8	7.78	<1	1.94	22.7	<1	<1	16.4	2.85	67.5	7.37	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	35	< 1.0	< 1.0	< 1.0	< 1.0	210	42
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		8	33.6	178	36.2	63	24.5	98.7	19.2	7.16	524	58.9	184	73.9	240	150	71	< 5.0	< 5.0	< 5.0	200	< 5.0	190	300	< 5.0	< 5.0	46	< 5.0	470	250
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	202.89	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	164.594	<0.01	<0.01	0.0196	<0.01	<0.01	<0.01	0.0342	<0.01	0.019	0.078	0.0243	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 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	1.0	259.933	<1	<1	<1	<1	<1	<1	1.04	<1	<1	1.74	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	<1	<1	<1	1.22	<1	<1	1.95	<1	<1	32.1	3.55	<1	4.09	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14	24	< 1.0	< 1.0	< 1.0	< 1.0	41	9.6
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	<1	4.67	4.73	18.7	3.82	4.9	2.36	1.39	<1	44.4	3.22	1.17	6.64	< 1.0	< 1.0	5.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	71	170	< 1.0	9.4	3.3	< 1.0	100	110
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	7.01	11.7	12.5	70.8	4.99	50.9	9.4	20.4	3.94	104	6.03	34.4	27.9	< 1.0	< 1.0	66	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1600	2500	< 1.0	79	24	< 1.0	2500	760
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	<1	<1	1.59	9.27	<1	8.57	1.42	5.6	<1	10.9	<1	4.61	3.05	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	410	580	< 1.0	< 1.0	< 1.0	< 1.0	120	64
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		8.07	18.2	19.7	101	9.99	64.8	16.2	27.6	5.22	194	14.1	40.7	41.8	< 5.0	< 5.0	72	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2100	3300	< 5.0	89	27	< 5.0	2700	940
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		16.1	51.8	198	137	73	89.3	115	46.8	12.4	718	73.1	225	116	240	150	140	< 10	< 10	< 10	200	< 10	2300	3600	< 10	93	73	< 10	3200	1200
Benzene	M	2760	µg/kg	1.0	4358	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	160	240	< 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	147182	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	22	6.2	< 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	92030	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	33	6.1	< 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		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	36	5.7	< 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		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.2	3	< 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		<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 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	0.10	31.45	0.023	0.254	0.253	1.33	0.311	0.0923	0.134	0.145	0.0246	0.866	0.416	<0.009	0.0767	4.6	9.6	11	8.4	5.5	< 0.10	4.8	12	< 0.10	< 0.10	< 0.10	< 0.10	0.75	< 0.10	1.5	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	19.168	<0.012	0.0729	0.058	0.508	0.0547	0.0401	0.0147	0.0438	<0.012	0.279	0.0889	<0.012	<0.012	0.31	1	1.7	0.32	0.95	< 0.10	0.67	0.72	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	9	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	34.073	<0.008	0.0274	0.0698	0.112	0.0178	0.0435	0.0116	<0.008	<0.008	0.0543	0.0136	<0.008	<0.008	0.15	0.27	0.35	0.24	0.18	< 0.10	0.18	0.22	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	0.13	< 0.10
Fluorene	M	2800	mg/kg	0.10	31.077	<0.01	0.0812	0.0649	0.419	0.022	0.0472	0.0108	0.0272	<0.01	0.227	0.0637	<0.01	0.0322	0.15	0.78	1.2	0.28	0.13	< 0.10	0.84	0.53	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	0.32	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	31.077	0.0428	0.782	2.3	3.88	0.308	0.366	0.266	0.275	0.0297	1.93	0.476	<0.015	0.256	1.2	6.5	10	1.8	0.89	0.29	4.7	3.3	1.5	1.4	0.51	2.8	1.4	0.24	1.9	< 0.10
Anthracene	M	2800	mg/kg	0.10	39.119	<0.016	0.206	0.263	0.944	0.0706	0.0886	0.0323	0.0705	<0.016	0.418	0.102	<0.016	0.0391	0.28	2.1	3.3	0.41	0.37	0.13	1.3	0.97	3.3	3.1	0.3	1.2	0.3	0.19	6.3	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	7.614	0.0891	1.1	2.06	6.78	0.544	0.749	0.338	0.399	0.0307	3.04	0.732	0.164	0.17	2.4	15	24	2.4	4.3	0.32	8.4	6.6	20	18	1.6	9.1	1.5	1	27	0.46
Pyrene	M	2800	mg/kg	0.10	87.557	0.0737	0.788	1.41	4.88	0.434	0.661	0.277	0.313	0.0261	2.25	0.558	0.258	0.322	2	11	16	1.8	3.6	0.26	6	4.8	21	18	1.4	6.6	1.1	1.2	36	0.39
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	0.055	0.382	0.718	2.89	0.256	0.505	0.181	0.23	0.0203	1.33	0.319	0.106	0.128	1.4	6.6	13	1.2	2.9	< 0.10	4.1	3.6	17	15	1.1	4.2	0.73	0.7	22	< 0.10
Chrysene	M	2800	mg/kg	0.10	711.578	0.0606	0.354	0.856	2.69	0.255	0.591	0.206	0.226	0.0228	1.15	0.292	0.153	0.194	1.4	6.6	13	0.96	2.5	< 0.10	4	3.2	18	16	1.2	5	0.56	0.73	37	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	0.104	0.557	1.03	4.21	0.455	0.91	0.35	0.454	0.0316	2.1	0.495	0.209	0.187	2.8	9.5	19	1.9	6.6	< 0.10	6.1	5.8	40	36	2.2	7.3	1	1.7	65	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	0.0295	0.185	0.421	1.35	0.138	0.375	0.141	0.126	<0.014	0.682	0.171	<0.014	0.0476	0.7	3.4	6.3	0.63	1.9	< 0.10	1.8	2	12	11	0.67	2.2	0.3	0.57	22	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	0.0567	0.323	0.63	2.9	0.267	0.609	0.173	0.241	0.0181	1.36	0.3	0.0984	0.0947	2.1	7.8	14	1.2	5.1	< 0.10	4.2	4.4	33	29	1.5	5.2	0.67	1.2	55	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	0.0622	0.301	0.515	2.45	0.232	0.562	0.143	0.232	<0.018	1.18	0.27	<0.018	0.0716	2.2	6.6	13	1.4	5.3	< 0.10	3.1	3.9	35	30	1.2	4.5	< 0.10	1.2	50	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	<0.023	0.0428	0.0923	0.368	0.041	0.111	<0.023	0.0482	<0.023	0.22	0.0532	<0.023	<0.023	0.27	0.88	2.2	0.24	0.79	< 0.10	0.62	0.5	4.9	4.2	0.24	0.75	< 0.10	0.19	8.3	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	0.0502	0.249	0.489	2.07	0.209	0.58	0.155	0.211	<0.024	1.09	0.25	<0.024	0.0918	1.4	4.6	8.3	0.97	4	< 0.10	2.8	2.9	30	26	1.3	4.3	< 0.10	1.2	49	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		0.647	5.71	11.2	37.8	3.62	6.33	2.43	3.04	0.204	18.2	4.6	0.989	1.71	23	92	160	24	45	< 2.0	54	55	240	210	13	53	8.8	10	390	< 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	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	3.497	<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	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020		<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	< 0.020	< 0.020	< 0.020	0.24	< 0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		<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	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020															< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020															< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.10		<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	< 0.10	< 0.10	< 0.10	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

*LOD used where < LOD is recorded.

Below screening value
Above screening value

5e1 Screening Sheet

Client: Rodgers Leask Environmental	Chemtest Job No.:																																						
Quotation No.: Q21-24056	Chemtest Sample ID.:																																						
Project: P18-669						ples				Fill Material Samples						Fill Material Samples						Fill Material Samples							Fill Material Samples						Fill Material Samples				
Client: Rodgers Leask Environmental	Job No.:					22-24434	22-24434	22-24434	210218-32	210218-32	210218-32	210218-32	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60	210217-69	210217-69	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
Quotation No.: Q21-24056	Sample ID.:					1458088	1458089	1458090																															
	Client Sample Ref.:				Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	R164-8	R164-9	R164-10	W131-1	W131-2	W131-3	W131-4	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18	W204-19	W204-20	W206-1	W206-2	W206-3	W206-4	W209C-1	W209C-2	W209C-3
	Sample Type:					SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	Top Depth (m):					-	-	-	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20
	Bottom Depth (m):					-	-	-																															
	Date Sampled:					27-Jun-2022	27-Jun-2022	27-Jun-2022	17/02/2021	17/02/2021	17/02/2021	17/02/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	2/15/2021	15/02/2021	15/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
	Asbestos Lab:						DURHAM																																
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																																			
ACM Type	U	2192		N/A			-																																
Asbestos Identification	U	2192		N/A			No Asbestos Detected		Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	-	Not Detected	Not Detected	-	Not Detected	-	Not Detected	-	Detected
Asbestos Quantification Total			%						-	-	-	-	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			<0.001	-	-	-	-	-	<0.001
Moisture	N	2030	%	0.020		7.7	1.1	0.15	11	12	12	12	13	15	14	18	12	11	13	14	15	14	13	15	14	16	14	16	12	14	21	14	14	14	11	18	10	11	12
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Dark Brown	Dark Brown	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Dark Brown	Black	Dark Brown	Dark Brown	Dark Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Vegetation	Stones	None	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	None
Soil Texture	N	2040		N/A		Sand	Sand	Sand																															
pH	M	2010		4.0		10.3	11.8	11.7	9.16	8.95	8.63	8.88	11.4	11.4	9.21	9.11	11.9	12	11.3	11.6	11	11	10	9.39	11.1	11.1	9.59	10.4	11.1	11.4	9.41	9.27	9.97	8.95	9.27	8.43	10	9.64	10.6
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	0.5	< 0.50	0.7	1.11	<1	1.11	<1	<1	<1	2.93	2.47	<1	<1	<1	<1	<1	<1	<1	<1	1.29	1.17	<1	<1	2.53	2.19	1.25	<1	<1	<1	<1	<1	<1	4.41	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	16	5.1	3.1	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12	<12
Iron (Total)	N	2430	mg/kg	100	349148.01	16000	22000	24000	148000	141000	233000	111000	117000	107000	133000	125000	130000	92300	107000	120000	102000	90400	84900	149000	119000	136000	84800	83300	209000	231000	121000	77600	83800	65100	91600	47800	76600.00	84600.00	111000.00
Arsenic	M	2450	mg/kg	1.0	2902.688	8.4	5.1	5.3	9.03	12.7	19.4	11.1	5.29	6.5	12.1	8.93	2.08	1.67	7.82	6.06	7.16	5.69	4.45	4.86	8.09	9.95	6.73	6.29	15	13.1	8.67	11.3	9.17	<6	7.44	8.56	<6	8.20	9.58
Cadmium	M	2450	mg/kg	0.10	83.661	0.78	0.47	0.7	<0.2	<0.2	<0.2	0.376	<0.02	1.1	0.889	3.72	<0.02	0.512	<0.02	0.81	<0.02	0.946	<0.02	0.847	0.465	0.329	<0.02	0.727	1.86	4.03	<0.02	0.321	0.347	<0.2	<0.2	<0.2	<0.2	<0.2	0.21
Chromium	M	2450	mg/kg	1.0	10806.907	94	400	200	26.1	62.2	10.9	124	232	332	126	156	310	304	269	198	219	237	196	392	132	96.4	226	286	213	93.2	162	90.4	97.9	105	222	115	66.80	70.00	213.00
Manganese	M	2450	mg/kg	5.0	38175.69	4500	20000	9500	4520	6790	6260	10700	17300	15300	17000	12600	24900	16200	23300	12500	17200	13400	12200	21900	13000	13700	12600	14600	24300	18300	11600	8500	7320	7680	11400	6260	6420.00	6890.00	20300.00
Copper	M	2450	mg/kg	0.50	516.883	18	27	22	41	25.1	45.5	28.6	17.9	17	22.7	21	9.9	7.53	18.1	18.2	23.1	14.7	13.8	11	15.1	18.5	15	14.4	22.1	23	19.4	22.9	23.6	33.5	21.5	25.2	<14	25.30	45.50
Mercury	M	2450	mg/kg	0.10	150.809	0.1	0.33	0.2	<1	<1	<1	<1	<0.1	<0.1	0.207	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	0.437	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1
Nickel	M	2450	mg/kg	0.50	13188.601	17	11	13	27.2	27.1	43.6	25.2	9.57	27.9	20.1	13.9	2.89	3.66	10.9	10.3	13.2	8.17	10.5	4.57	9.94	12.3	11.4	8.48	23.3	11.4	17.8	23.5	29.8	21	24.7	26.4	12.10	29.10	20.40
Lead	M	2450	mg/kg	0.50	18032.071	81	69	93	53.1	114	85.1	121	42.5	253	283	393	<0.7	1.66	39.8	34.5	49.8	66.5	32.8	40	255	381	48.5	36.3	486	1050	119	106	80.9	32.7	75.7	32.6	67.70	202.00	125.00
Selenium	M	2450	mg/kg	0.20	804.305	1.6	0.8	1.6	<10	<10	<10	<10	3.75	3.83	4.94	3.94	4.96	5.97	6.56	3.35	4.16	5.48	3.21	5.44	2.59	1.9	5.26	6.36	10.2	<1	1.71	3	<10	<10	<10	<10	<10	<10	13.70
Vanadium	U	2450	mg/kg	5.0	1840.198	96	340	240	99.9	137	99	193	248	326	490	662	233	228	259	316	252	204	175	404	671	364	202	327	1180	857	398	157	217	236	251	304	115.00	78.90	503.00
Zinc	M	2450	mg/kg	0.50	157599.516	310	140	200	168	353	299	373	189	248	1310	1580	48.3	48.1	174	174	213	260	141	122	901	1250	170	162	1100	2360	453	429	241	92.1	274	87.6	170.00	374.00	308.00
Organic Matter	M	2625	%	0.40		11	2.4	7.8	5.83	4.5	4.41	18.3	30.5	38.3	3.09	4.88	62.2	62.8	49	38.1	52.9	47.6	26.5	18.4	7.98	24.3	41.4	41	6.43	11.4	12.9	6.83	9.67	75.7	5.05	54.8	6.84	6.90	4.84
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0102	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0152	<0.01	<0.01	<0.01	<0.01	0.01
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	0.016	0.0342	<0.01	<0.01	0.0239	0.0509	0.0357	<0.01	0.0269	0.0187	<0.01	<0.01	0.0128	0.0345	<0.01	0.0108	0.065	0.0234	<0.01	<0.01	<0.01	0.062	0.0168	0.0415	0.01	0.02	0.02
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	0.016	0.0354	0.0174	<0.01	0.0228	0.0429	0.0449	0.0105	0.0257	0.0164	<0.01	<0.01	0.0186	0.0547	<0.01	0.0144	0.073	0.0363	<0.01	<0.01	<0.01	0.0398	0.0202	0.0268	0.03	0.04	0.04
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	<1	<1	<1	<1	3.34	2.17	<1	<1	2.3	1.47	1.79	1.72	<1	<1	<1	1.94	<1	<1	<1	<1	<1	1.13	<1	2.01	<1	<1	<1
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	5.5	2.73	<1	<1	7.37	5.75	3.54	4.79	5.49	3.71	5.17	5.52	<1	<1	<1	5.61	<1	<1	1.19	<1	<1	4.2	<1	6.1	5.59	2.36	3.55
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	< 1.0	57	77	<1	5.43	<1	6.96	32.4	12.5	18.7	19.3	10.1	19.3	15.7	37.9	10.7	9.39	6.81	8.37	4.64	3.25	3.29	16.2	20.8	26.8	3.78	4.86	<1	13.8	3.88	16.4	9.96	4.87	11.20
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	280	290	160	12.7	40.4	10.7	42.6	54.6	29.9	66	56.4	69.9	106	28.6	44.1	36.2	29.6	25.2	44.2	21.8	12.3	5.98	41.9	59.3	49.5	16.2	33.8	10.7	22.7	24.2	29.9	95.30	27.70	35.40
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	< 1.0	< 1.0	< 1.0	3.12	3.96	2.72	9.79	9.23	4.6	17.3	6.9	5.12	6.24	5.74	10.2	9.55	5.38	6.01	32.6	3.91	2.68	<1	17.4	20.7	16.2	3.59	8.53	1.56	3.75	4.96	6.33	97.00	13.90	30.30
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		280	350	240	16.6	50	14	60.4	102	50	103	83.4	95.8	140	54.1	97.6	64.3	49.6	45	92.5	30.7	18.6	10.1	83	101	93.3	25.1	48	13.3	45.6	33.5	60.8	208.00	48.80	80.60
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	0.0114	0.0236	0.0116	<0.01	0.0148	0.0294	0.0299	<0.01	0.0176	0.0117	<0.01	<0.01	0.0128	0.0357	<0.01	<0.01	0.049	0.0246	<0.01	<0.01	<0.01	0.0269	0.0134	0.0171	0.02	0.02	0.03
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	< 1.0	< 1.0	< 1.0	<1	<1	<1	<1	12.6	10.6	<1	<1	4.4	4.56	7.19	9.06	3.52	2.92	4.56	4.85	2.11	4.55	1.62	3.87	5.33	6.37	<1	<1	<1	<1	<1	1.25	1.02	<1	4.93
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	< 1.0	< 1.0	6	<1	1.28	3.48	<1	18.7	13.5	<1	<1	9.74	37.3	12.8	14	7.22	6.27	8	8.3	<1	3.39	2.22	9.58	12.8	51.6	1.51	1.94	<1	5.15	<1	8.9	13.00	<1	9.74
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	< 1.0	< 1.0	33	1.25	3.39	4.6	2.11	109	78.2	2.2	3.01	23.6	202	72.2	66.7	26	30.6	51.9	52.3	12.5	33.3	17.4	53.8	161	550	4.73	14.9	18.5	11.6	6.5	15.5	27.20	5.48	63.70
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	50	120	500	13.5	28.7	15.1	28.3	185	116	23.7	34	39.5	246	114	111	60.7	69.4	90.6	109	28.9	54.6	23.6	89	363	942	16.4	65.3	48.3	27.1	27.6	34.3	86.80	42.10	120.00
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	< 1.0	< 1.0	45	3.38	5.29	3.85	4.8	20.7	12.4	<1	2.13	1.04	22.2	10.7	10	3.36	5.63	6.59	6.94	2.06	3.74	2.24	6.04	68.8	150	<1	10.1	5	1.82	1.65	1.37	3.70	3.26	10.80
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		50	120	580	18.1	38.6	27	35.8	347	231	27.5	39.5	78.3	512	217	211	101	115	162	182	46.5	99.6	47	162	611	1700	24.1	93.1	73.1	46.3	36.4	61.4	132.00	51.40	210.00
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		330	470	820	34.7	88.7	41	96.1	449	281	131	123	174	652	271	308	165	164	207	274	77.2	118	57.2	245	712	1790	49.1	141	86.4	92	70	122	340.00	100.00	290.00
Benzene	M	2760	µg/kg	1.0	4358	< 1.0	< 1.0	< 1.0	<180	<180	<180	<180	<180	<180	<180	<180	<1800	<1800	<180	<180	<180	<180	<1800	<180	<180	<180	<1800	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
Toluene	M	2760	µg/kg	1.0	147182	< 1.0	< 1.0	< 1.0	<140	<140	<140	<140	<140	<140	<140	<140	<1400	<1400	<140	<140	<140	<140	<1400	<140	<140	<140	<1400	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140	<140
Ethylbenzene	M	2760	µg/kg	1.0	92030	< 1.0	< 1.0	< 1.0	<80	<80	<80	<80	<80	<80	<80	<80	<800	<800	<80	<80	<80	<80	<800	<80	<80	<80	<800	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80	<80
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200	<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200	<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	<200	<200	<2000	<2000	<200	<200	<200	<200	<2000	<200	<200	<200	<2000	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Naphthalene	M	2800	mg/kg	0.10	31.45	< 0.10	< 0.10	< 0.10	0.1	0.095	0.0485	0.0449	11.9	5.89	0.237	0.206	3.58	2.63	8.47	6.18	2.62	2.77	3.67	3.02	2.91	4.58	1.86	2.68	4.35	7.17	0.443	0.492	0.246	0.892	0.271	0.948	1.67	0.20	0.82
Acenaphthylene	N	2800	mg/kg	0.10	19.168	< 0.10	< 0.10	< 0.10	0.136	0.0458	0.0162	0.052	4.51	1.76	0.0219	0.0202	0.816	0.82	2.55	2.21	0.884	1.04	1.17	0.864	0.625	1.33	0.663	0.864	9.02	32.3	0.165	0.317	0.157	0.169	0.154	0.197	3.21	0.10	0.56
Acenaphthene	M	2800	mg/kg	0.10	34.073	< 0.10	< 0.10	< 0.10	0.026	0.0117	<0.008	0.012	0.28	0.151	0.0201	0.0245	0.0652	0.0616	0.232	0.163	0.0762	0.0961	0.0652	0.0603	0.134	0.159	0.0697	0.101	0.685	2.03	0.0413	0.0421	0.0193	0.125	0.021	0.153	0.57	0.02	0.04
Fluorene	M	2800	mg/kg	0.10	31.077	< 0.10	< 0.10	< 0.10	0.29	0.019	0.014	0.02	4.75	1.14	0.0349	0.0328	0.479	0.614	1.68	1.59	0.445	0.614	0.708	0.48	0.575	1.58	0.424	0.551	19.7	53	0.173	0.196	0.0903	0.257	0.0883	0.303	5.91	0.06	0.53
Phenanthrene	M	2800	mg/kg	0.10	31.077	2.3	< 0.10	1.3	1.26	0.204	0.138	0.183	29.3	8.11	0.276	0.255	4.27	6.05	12.2	11	4.22	5.88	7.67	5.13	4.36	8.82	3.89	4.79	89.5	226	1.03	1.57	0.655	1.57	0.717	1.99	25.10	0.46	2.45
Anthracene	M	2800	mg/kg	0.10	39.119	2.4	< 0.10	0.97	0.261	0.0498	0.0282	<0.016	10	2.13	0.0785	0.104	1	2.17	3.53	3.35	1.33	1.7	2.23	1.37	1.15	5.23	0.839	1.18	42.7	86	0.29	0.523	0.213	0.309	0.218	0.394	10.50	0.13	1.59
Fluoranthene	M	2800	mg/kg	0.10	7.614	9.5	0.75	6.9	1.36	0.452	0.177	0.438	31.5	9.52	0.561	0.539	5.94	8.38	17.2	16.7	7.54	9.41	9.61	6.77	7.08	13.9	5.48	6.75	111	331	1.68	3.56	1.58	1.88	1.7	2.92	30.90	0.94	4.01
Pyrene	M	2800	mg/kg	0.10	87.557	7.4	0.73	7	0.834	0.389	0.137	0.38	21.2	6.43	0.561	0.531	4.21	5.91	12.4	11.9	5.36	6.66	6.78	4.77	5.15	9.44	4.01	4.84	69.1	204	1.15	2.57	1.14	1.43	1.24	2.15	18.60	0.79	2.96
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	3.7	0.29	4.5	0.471	0.285	0.0913	0.237	9.91	3.31	0.328	0.314	2.1	2.6	6.24	6.2	2.76	3.21	3.34	2.27	2.6	4.93	1.9	2.45	34.9	109	0.656	1.82	0.686	0.857	0.743	1.15	9.36	0.54	1.49
Chrysene	M	2800	mg/kg	0.10	711.578	5.7	0.38	7.4	0.425	0.324	0.108	0.271	8.26	2.69	0.349	0.348	2.03	2.17	5.26	4.76	2.49	2.71	2.85	1.92	2.36	4.27	1.61	2.02	34.6	84.6	0.659	1.55	0.675	0.876	0.631	0.923	7.28	0.60	1.24
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	6.5	< 0.10	12	0.57	0.546	0.144	0.447	11.1	4.3	0.572	0.552	2.44	2.93	7.94	7.67	3.55	3.95	4.09	2.62	3.65	6.31	2.54	3.31	39.8	121	0.887	2.56	0.96	1.2	1.08	1.49	9.44	0.96	1.93
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	2.1	< 0.10	4.2	0.209	0.173	0.0445	0.111	4.22	1.34	0.176	0.177	0.759	0.924	2.65	2.29	1.05	1.24	1.43	0.836	1.06	1.59	0.855	1.04	13.6	36.5	0.277	0.844	0.297	0.397	0.329	0.438	3.56	0.32	0.64
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	5.5	< 0.10	9.9	0.328	0.322	0.0737	0.246	7.24	2.55	0.358	0.346	1.43	1.93	4.75	4.49	2.07	2.28	2.57	1.59	2.18	3.21	1.58	1.92	24.4	71.9	0.435	1.52	0.556	0.689	0.631	0.86	6.11	0.58	1.12
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	< 0.10	< 0.10	10	0.262	0.291	0.0705	0.224	6.53	2.45	0.305	0.308	1.17	1.43	4.3	3.77	1.84	1.95	2.26	1.34	2.04	2.57	1.23	1.82	18.6	56.7	0.384	1.39	0.43	0.491	0.514	0.596	4.08	0.44	0.81
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	< 0.10	< 0.10	1.2	0.0467	0.0584	<0.023	<0.023	0.993	0.414	0.0622	0.0437	0.232	0.236	0.682	0.728	0.311	0.373	0.415	0.253	0.296	0.588	0.273	0.296	4.28	12	<0.023	0.292	0.106	0.149	0.089	0.15	0.77	0.09	0.20
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	< 0.10	< 0.10	9.8	0.231	0.281	0.0686	0.236	4.36	1.69	0.279	0.257	0.867	1.03	2.97	2.82	1.31	1.49	1.68	1.01	1.47	2	0.967	1.27	13	39.7	0.319	1.12	0.424	0.515	0.442	0.534	3.22	0.50	0.72
Total Of 16 PAH's	N	2800	mg/kg	2.0		45	2.2	75	6.81	3.55	1.16	2.9	166	53.9	4.22	4.06	31.4	39.9	93	85.9	37.8	45.4	50.5	34.3	37.6	70.5	28.2	35.9	529	1470	8.58	20.4	8.24	11.8	8.87	15.2	140.00	6.71	21.10
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020																															
Phenol	M	2920	mg/kg	0.020	3.497	< 0.020	< 0.020	< 0.020	<0.01	<0.01	<0.01	<0.01	0.0114	0.0118	<0.01	<0.01	<0.01	0.0113	0.0115	0.0234	<0.01	<0.01	<0.01	<0.01	<0.01	0.0119	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	<0.01	<0.01	<0.01	0.0114	0.0228	0.0354	<0.01	<0.01	<0.01	<0.01	0.0115	<0.01	<0.01	<0.01	0.0115	0.0117	<0.01	<0.01	0.0116	0.012	0.0342	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	<0.015	<0.015	<0.015	<0.015	<0.015	0.0236	<0.015	<0.015	<0.015	<0.015	0.506	<0.015	<0.015	0.269	<0.015	<0.015	0.789	<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	0.020		< 0.020	< 0.020	< 0.020																															
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020																															
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	<0.035	<0.035	<0.035	<0.035	<0.035	0.0708	<0.035	<0.035	<0.035	<0.035	0.529	<0.035	<0.035	0.269	<0.035	<0.035	0.789	<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

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:																																					
Quotation No.: Q21-24056	Chemtest Sample ID.:																																					
Project: P18-669						Fill Material Samples								Fill Material Samples						Fill Material Samples						Fill Material Samples						Fill Material Samples					Fill Material Sampl	
Client: Rodgers Leask Environmental	Job No.:					210218-32	210218-32	210218-32	21-41336	21-41336	210114-156	210114-156	22-29945	210129-39	210129-39	210115-27	210115-27	22-16145	22-16145	22-16145	21-41336	22-14900	210115-27	210115-27	210115-27	210115-27	210114-154	210114-154	22-14900	22-14900	22-14900	22-14900	22-14900	22-29945	22-20454	22-20454	210127-42	210127-42
Quotation No.: Q21-24056	Sample ID.:								1326721	1326722			1482833					1420835	1420836	1420838	1326715	1415350							1415351	1415352	1415353	1415354	1415355	1482832	1440197	1440198		
	Client Sample Ref.:				Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	W209C-4	W209B-1	W209B-2	AT26-1	AT26-2	AV29-1	AV29-2	AV30-1	AI30-1	AI30-2	AL24-1	AL24-2	AN29-1	AN29-2	AN30-1	AN31-1	AP27-1	AQ25-1	AQ25-2	AQ26-1	AQ26-2	AR21-1	AR21-2	AR26-1	AR25-1	AR26-2	AR24-1	AR24-2	AU29-1	AW37-1	AW37-2	P16-1	P16-2
	Sample Type:					SOLID	SOLID	SOLID	SOIL	SOIL	SOLID	SOLID	SOIL	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOLID	SOLID
	Top Depth (m):					0.20-0.20	0.20-0.20	0.20-0.20	1.0	1.4	0.80-0.80	1.70-1.70	1.0	0.30-0.30	1.80-1.80	0.70-0.70	1.30-1.30	0.3	1.0	0.4	0.3	0.4	0.20-0.20	1.50-1.50	0.20-0.20	1.50-1.50	0.30-0.30	1.20-1.20	0.5	0.4	1.5	0.3	1.6	0.6			0.30-0.30	1.30-1.30
	Bottom Depth (m):																	0.3	1.0	0.4		20-Apr-2022							20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022		0.30	1.50		
	Date Sampled:					17/02/2021	17/02/2021	17/02/2021	19-Nov-2021	19-Nov-2021	13/01/2021	13/01/2021	04-Aug-2022	28/01/2021	28/01/2021	13/01/2021	13/01/2021	28-Apr-2022	28-Apr-2022	28-Apr-2022	19-Nov-2021	NEW-ASB	13/01/2021	13/01/2021	13/01/2021	13/01/2021	11/01/2021	11/01/2021		NEW-ASB	NEW-ASB		NEW-ASB	04-Aug-2022	30-May-2022	30-May-2022	26/01/2021	26/01/2021
	Asbestos Lab:												COVENTRY						NEW-ASB	NEW-ASB															DURHAM			
Determinand	**Accred.**	**SOP**	**Units**	**LOD**																																		
ACM Type	U	2192		N/A					-				-						-	-	-	-								-	-		-		-			
Asbestos Identification	U	2192		N/A		-	Not Detected	-	No Asbestos Detected		Not Detected	-	No Asbestos Detected	-	Detected	Not Detected	-		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Not Detected	-	Not Detected	-	Not Detected	-		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Not Detected	-
Asbestos Quantification Total			%			-	-	-			-	-			0.0018	-	-																				-	-
Moisture	N	2030	%	0.020		11	14	16	11	9.4	15	12	9.2	12	0.0018	15	13	11	6.6	9.6	9	6.1	24	8.2	18	6.7	13	11	6.9	4.8	12	4.1	12	6.9	5.1	11	8.6	10
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Brown	Brown	Dark Brown	Black	Brown	Dark Brown	Dark Brown	Black	Grey	Brown	Brown	Brown	Black	Black	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown	Grey	Grey
Other Material	N	2040		N/A		Stones	Stones	Vegetation	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None	Stones	None	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A					Sand	Sand			Gravel					Sand	Sand	Sand	Sand	Gravel							Gravel	Gravel	Gravel	Gravel	Loam	Loam	Sand	Sand		
pH	M	2010		4.0		9.58	9.32	8.93	> 12.0	11	11.3	8.31	9.6	9.97	10.5	10.4	11	10	10.3	10.1	> 12.0	10.8	9.53	12.7	9.19	12.7	10	10.2	11.6	11.2	10.9	> 12.0	10.2	9.5	11.6	11.1	12.4	12.6
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	2.07	1.96	4.05	1.1	< 0.50	<1	<1	0.8	<1	2.13	<1	<1	1.4	1.4	< 0.50	3.6	< 0.50	1.06	<1	<1	<1	1.43	9.2	0.9	< 0.50	0.6	< 0.50	0.6	0.8	< 0.50	< 0.50	<1	<1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	<12	<12	<12	< 0.50	1.2	<12	127	12	<12	<12	<12	<12	0.7	0.58	< 0.50	0.7	2.7	<12	<12	<12	<12	<12	<12	2.2	5.8	1.7	1.1	38	33	0.67	0.86	<12	<12
Iron (Total)	N	2430	mg/kg	100	349148.01	58200.00	85300	84200	22000	22000	321000	14800	92000	82800	44500	31600	12000	26000	27000	20000	23000	11000	98900	210000	86000	253000	223000	211000	34000	38000	13000	35000	13000	81000	17000	9800	144000	127000
Arsenic	M	2450	mg/kg	1.0	2902.688	<6	9.46	8.55	33	30	17.2	4.66	28	6.78	<6	7.68	1.33	4.9	3.9	2.8	27	3.6	8.52	<6	8.64	6.23	12.6	12.6	3.3	7.9	4	4.6	3.5	12	1.4	18	78.6	<6
Cadmium	M	2450	mg/kg	0.10	83.661	<0.2	<0.2	<0.2	0.1	0.74	4.82	0.297	2.4	0.861	0.689	<0.02	<0.02	0.89	0.35	< 0.10	0.34	< 0.10	1.23	<0.2	0.337	0.794	<0.2	<0.2	0.11	< 0.10	< 0.10	0.37	< 0.10	12	0.59	0.26	<0.2	0.628
Chromium	M	2450	mg/kg	1.0	10806.907	91.00	49	38.2	400	140	<9	<9	79	144	50.7	13.1	7.04	94	140	19	410	48	257	565	255	302	<9	74.3	140	27	59	380	9.7	43	160	32	378	546
Manganese	M	2450	mg/kg	5.0	38175.69	3960.00	5670	8710	28000	5200	10900	2880	9500	13500	2670	2410	4760	< 1.0	< 1.0	3700	17000	3500	13100	49500	13700	24100	6220	9100	9200	2000	4800	23000	640	3300	6700	2200	93900	27400
Copper	M	2450	mg/kg	0.50	516.883	67.50	33.5	24.7	94	140	43.9	14.3	27	14.4	21.8	12.2	<1.4	16	15	12	39	45	25.6	28.5	19.3	20.4	23.1	40.5	13	13	7.7	44	14	29	9.3	12	54.4	22.5
Mercury	M	2450	mg/kg	0.10	150.809	<1	<1	<1	0.93	0.41	<1.4	<0.14	0.15	<1.4	<1.4	<0.14	<0.14	0.07	0.11	< 0.05	1.3	< 0.10	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.05	0.07	<1.4	<1.4
Nickel	M	2450	mg/kg	0.50	13188.601	27.90	30.3	24.5	51	34	41.6	7.14	41	14.1	12.7	10.4	0.818	9.1	8.9	4.9	21	5.5	21.8	23.7	20.8	39	57.9	71.6	11	21	5.3	14	7.1	22	3.2	7.3	50.8	8.48
Lead	M	2450	mg/kg	0.50	18032.071	64.10	78	71.2	31	120	1400	31.7	120	15.9	50.1	18.4	<0.7	140	63	12	67	18	132	24.2	121	18.9	98.9	117	16	32	12	42	16	360	25	30	55.2	10.1
Selenium	M	2450	mg/kg	0.20	804.305	<10	<10	<10	< 0.20	< 0.20	<10	6.48	1.2	11.8	<10	2.33	2.98	0.35	1.5	3.1	< 0.20	4.2	<10	27.6	10.7	<10	<10	<10	< 0.20	< 0.20	6.8	12	0.48	1.6	0.31	1.2	71.3	12.7
Vanadium	U	2450	mg/kg	5.0	1840.198	105.00	137	77.9	2300	180	156	22.1	78	370	73	28.7	23.1	120	130	31	360	85	361	1960	318	1300	77.7	176	520	140	88	370	16	52	110	80	416	473
Zinc	M	2450	mg/kg	0.50	157599.516	3020.00	172	172	69	220	2780	83	390	77.7	183	83.8	10.8	690	170	39	130	29	446	55.6	359	114	237	314	39	66	22	110	49	690	91	59	95.3	51.7
Organic Matter	M	2625	%	0.40		4.64	46.4	64.1	2.2	7.1	11.5	1.45	26	3.86	8.36	>100	2.76	21	11	6.4	26	13	19.1	1.57	7.38	0.924	15.5	18.1	2.1	0.81	7.6	6.2	62	28	1.7	8.1	18.8	2.16
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	0.0182	< 1.0	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0432	<0.01	0.011	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.035	0.0322
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626	0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	0.041	< 1.0	0.0148	0.0313	0.0118	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0838	<0.01	0.0451	<0.01	0.0127	0.0224	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0427	0.0722
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98	0.02	<0.01	<0.01	< 1.0	< 1.0	<0.01	0.0855	< 1.0	0.0274	0.0592	0.0106	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.148	<0.01	0.0451	<0.01	0.0207	0.0291	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.093	0.0544
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23	<1	<1	<1	< 1.0	< 1.0	<1	<1	< 1.0	<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	8	<1	<1	<1	<1	<1	<1	< 1.0	16	19	13	14	< 1.0	< 1.0	< 1.0	<1	<1
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	1.46	1.49	2.09	< 1.0	< 1.0	<1	4.07	< 1.0	<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	56	3.27	1.44	1.96	<1	<1	<1	< 1.0	23	38	22	20	< 1.0	< 1.0	< 1.0	1.64	<1
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	3.72	10.6	12.9	< 1.0	< 1.0	20.5	6.36	< 1.0	<1	<1	11.4	<1	< 1.0	< 1.0	< 1.0	< 1.0	50	11	9.49	6.42	7.27	4.98	10.5	< 1.0	54	35	24	26	< 1.0	< 1.0	< 1.0	5.25	3.98
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	18.00	27.2	26	< 1.0	< 1.0	38	17	< 1.0	4.75	16.5	5.32	4.98	< 1.0	< 1.0	< 1.0	< 1.0	52	46	64.5	20.9	51.1	22.1	157	70	350	140	100	70	< 1.0	< 1.0	< 1.0	38.9	31.3
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	6.52	7.18	3.98	< 1.0	< 1.0	1.09	6.1	< 1.0	<1	32.5	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13.3	32.9	4.25	18.2	6.46	41.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.52	6.17
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		29.90	46.4	45	< 5.0	< 5.0	60.4	33.5	< 5.0	6.37	56.3	17	5.85	< 5.0	< 5.0	< 5.0	< 5.0	170	74.5	108	33.6	77.4	34.1	211	70	440	230	160	130	< 5.0	< 5.0	< 5.0	56	42.6
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	<0.01	< 1.0	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	<0.01	< 1.0	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<0.01	0.0167
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594	0.02	<0.01	<0.01	< 1.0	< 1.0	<0.01	0.057	< 1.0	0.0182	0.0394	<0.01	<0.01	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0983	<0.01	0.0305	<0.01	0.0138	0.0202	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0613	0.0355
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	<1	<1	<1	< 1.0	< 1.0	<1	<1	< 1.0	<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12.2	<1	2.82	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	<1
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	<1	3.88	4.65	< 1.0	< 1.0	<1	<1	< 1.0	<1	<1	<1	<1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	14.3	1.08	3.48	<1	<1	<1	< 1.0	2.6	9.6	3.6	4.1	< 1.0	< 1.0	< 1.0	3.02	<1
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	5.04	21.6	26.9	< 1.0	6.4	2.14	<1	5.6	2.87	41.6	14.5	1.03	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	104	10	30.3	6.19	1.86	7.3	< 1.0	< 1.0	4.4	< 1.0	< 1.0	< 1.0	5.1	< 1.0	13.7	6.53
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	34.00	79.7	91.5	< 1.0	56	5.16	4.64	120	12.3	112	67	2.27	< 1.0	< 1.0	< 1.0	< 1.0	32	218	31.3	125	19.6	32.5	67.5	40	52	58	37	36	< 1.0	44	< 1.0	14.7	11.7
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	7.38	7.37	9.77	< 1.0	< 1.0	<1	<1	< 1.0	1.71	13.8	9.07	<1	< 1.0	< 1.0	< 1.0	< 1.0	6.4	24.1	6.46	15.2	2.6	1.88	2.56	< 1.0	5.9	7.2	< 1.0	5	< 1.0	< 1.0	< 1.0	<1	<1
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		46.80	113	133	< 5.0	63	8.8	6.04	130	17.1	170	91.8	<5	< 5.0	< 5.0	< 5.0	< 5.0	38	372	49.2	177	28.8	36.4	77.7	40	61	80	40	45	< 5.0	49	< 5.0	33.8	20.1
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		76.70	160	178	< 10	63	69.2	39.7	130	23.5	227	109	<10	< 10	< 10	< 10	< 10	200	447	158	211	106	70.6	288	110	510	310	200	170	< 10	49	< 10	90	62.9
Benzene	M	2760	µg/kg	1.0	4358	<180	<180	<180	< 1.0	< 1.0	<180	<180	< 1.0	<180	<180	<180	<180	< 1.0	< 1.0	< 1.0	< 1.0	7.6	<180	<180	<180	<180	<180	<180	< 1.0	< 1.0	8.9	< 1.0	63	< 1.0	< 1.0	< 1.0	<180	<180
Toluene	M	2760	µg/kg	1.0	147182	<140	<140	<140	< 1.0	< 1.0	<140	<140	< 1.0	<140	<140	<140	<140	< 1.0	< 1.0	< 1.0	< 1.0	2.9	<140	<140	<140	<140	<140	<140	< 1.0	< 1.0	2.3	< 1.0	17	< 1.0	< 1.0	< 1.0	<140	<140
Ethylbenzene	M	2760	µg/kg	1.0	92030	<80	<80	<80	< 1.0	< 1.0	<80	<80	< 1.0	<80	<80	<80	<80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<80	<80	<80	<80	<80	<80	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<80	<80
m & p-Xylene	M	2760	µg/kg	1.0		<200	<200	<200	< 1.0	< 1.0	<200	<200	< 1.0	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200
o-Xylene	M	2760	µg/kg	1.0		<200	<200	<200	< 1.0	< 1.0	<200	<200	< 1.0	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		<200	<200	<200	< 1.0	< 1.0	<200	<200	< 1.0	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<200	<200
Naphthalene	M	2800	mg/kg	0.10	31.45	0.16	0.514	0.439	0.18	0.59	0.0383	0.0112	< 0.10	0.127	0.649	0.426	0.0663	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	7.62	1.23	3.89	0.198	0.125	0.209	0.73	< 0.10	2.1	< 0.10	< 0.10	< 0.10	0.41	< 0.10	0.776	0.386
Acenaphthylene	N	2800	mg/kg	0.10	19.168	0.07	0.319	0.145	0.13	0.25	<0.012	<0.012	< 0.10	0.101	0.56	0.169	0.0182	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.88	0.83	0.833	0.139	0.0407	0.0738	0.14	< 0.10	0.11	< 0.10	< 0.10	< 0.10	0.47	< 0.10	0.367	0.262
Acenaphthene	M	2800	mg/kg	0.10	34.073	0.02	0.0306	0.0326	0.33	0.14	<0.008	<0.008	< 0.10	0.0141	0.0675	0.0407	0.0169	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.264	0.195	0.209	0.135	0.0116	0.0344	0.27	< 0.10	0.23	< 0.10	< 0.10	< 0.10	0.45	< 0.10	0.0145	0.0197
Fluorene	M	2800	mg/kg	0.10	31.077	0.05	0.151	0.13	0.19	0.24	0.012	<0.01	< 0.10	0.107	0.455	0.129	0.0323	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.69	1.05	0.761	0.146	0.0215	0.0549	0.16	< 0.10	0.3	< 0.10	< 0.10	< 0.10	0.34	< 0.10	0.0837	0.153
Phenanthrene	M	2800	mg/kg	0.10	31.077	0.30	1.46	1.12	3.7	1.2	0.113	0.0287	< 0.10	0.703	4.26	1.51	0.262	0.2	1.2	1.1	0.59	0.44	13.9	10.4	6.66	3.29	0.413	1.79	2.2	0.35	1.6	0.7	1.8	0.75	3	0.47	2.43	3.04
Anthracene	M	2800	mg/kg	0.10	39.119	0.12	0.408	0.302	0.54	0.36	<0.016	<0.016	< 0.10	0.133	0.965	0.392	0.0673	< 0.10	0.2	0.24	0.24	< 0.10	3.19	1.95	1.42	0.462	0.0946	0.398	0.4	< 0.10	0.35	< 0.10	0.1	0.2	1.1	< 0.10	0.432	1.22
Fluoranthene	M	2800	mg/kg	0.10	7.614	0.60	2.99	1.8	5.7	2.3	0.0829	0.0285	4	0.992	6.72	3.04	0.419	0.16	3	1.7	1.5	0.29	20.8	11.9	11.1	3.38	0.849	3.42	4.2	0.55	1.4	1.3	0.21	0.47	8	0.58	1.78	3.66
Pyrene	M	2800	mg/kg	0.10	87.557	0.48	2.23	1.46	5.2	1.6	0.0728	0.0246	3.2	0.737	4.72	2.42	0.42	0.15	2.7	1.5	1.3	0.2	14.2	8.11	8.06	2.39	0.635	2.41	3.5	0.4	1	1.2	0.26	0.54	7.3	0.6	1.13	2.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	0.30	1.36	0.955	4	1.5	0.0221	0.0165	2.6	0.406	2.83	1.8	0.191	0.12	2.1	0.7	0.71	0.11	7.6	4.79	4.41	1.65	0.441	1.4	2.4	0.13	0.64	0.64	< 0.10	< 0.10	5.4	0.37	0.563	1.56
Chrysene	M	2800	mg/kg	0.10	711.578	0.29	1.36	1.02	3.5	1.6	0.0251	0.016	2	0.356	2.36	2	0.202	0.15	2.9	0.76	0.99	0.17	6.16	4.7	3.82	1.68	0.427	1.29	2.9	0.17	0.7	0.71	0.57	< 0.10	6.3	0.49	0.46	1.32
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	0.52	2.23	1.42	5.8	2.5	0.0191	0.028	6.1	0.607	3.87	2.78	0.352	< 0.10	3.7	0.91	1.5	< 0.10	10.6	5.93	6.83	2.29	0.74	1.87	4.2	< 0.10	0.57	1.3	< 0.10	< 0.10	9	0.42	0.386	1.53
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	0.14	0.691	0.39	2.1	0.61	<0.014	<0.014	1.7	0.206	1.22	0.875	0.121	< 0.10	1.3	0.32	0.26	< 0.10	3.74	2.16	2.3	0.774	0.246	0.538	1.6	< 0.10	0.15	1.2	< 0.10	< 0.10	4	0.25	0.189	0.562
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	0.29	1.28	0.786	4.6	1.4	<0.015	<0.015	4.2	0.377	2.31	1.82	0.207	< 0.10	2.6	0.75	0.95	< 0.10	6.21	4.09	3.97	1.33	0.438	1.26	3.4	< 0.10	0.47	0.91	< 0.10	< 0.10	8.2	0.42	0.349	1.06
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	0.25	1.13	0.654	4.1	1.3	<0.018	<0.018	< 0.10	0.376	2.31	1.44	0.19	< 0.10	1.6	0.47	0.75	< 0.10	5.25	3.43	3.7	1.15	0.422	0.975	2.4	< 0.10	0.28	0.71	< 0.10	< 0.10	5.3	< 0.10	0.285	0.859
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	0.05	0.175	0.162	0.64	0.43	<0.023	<0.023	< 0.10	0.0672	0.34	0.345	0.0385	< 0.10	0.35	< 0.10	0.28	< 0.10	0.676	0.686	0.454	0.261	0.0871	0.218	0.46	< 0.10	0.16	< 0.10	< 0.10	< 0.10	0.74	< 0.10	0.0562	0.157
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	0.25	1.03	0.69	3.7	1.3	<0.024	<0.024	< 0.10	0.313	1.71	1.41	0.17	< 0.10	1.9	0.52	0.73	< 0.10	4.23	2.93	3.04	1.01	0.392	0.933	2.2	< 0.10	0.38	0.79	< 0.10	< 0.10	5.2	< 0.10	0.225	0.653
Total Of 16 PAH's	N	2800	mg/kg	2.0		3.91	17.4	11.5	44	17	0.385	0.153	24	5.62	35.3	20.6	2.77	< 2.0	24	9	9.8	< 2.0	108	64.4	61.4	20.3	5.38	16.9	31	< 2.0	10	9.5	2.9	< 2.0	65	3.6	9.53	18.8
Resorcinol	M	2920	mg/kg	0.020					< 0.020	< 0.020			< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020							< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
Phenol	M	2920	mg/kg	0.020	3.497	<0.01	<0.01	<0.01	< 0.020	< 0.020	<0.01	<0.01	< 0.020	<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.01	0.0109	<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	0.32	< 0.020	< 0.020	< 0.020	<0.01	<0.01
Cresols	M	2920	mg/kg	0.020		0.01	<0.01	<0.01	< 0.020	< 0.020	<0.01	<0.01	< 0.020	<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 0.020	< 0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020	0.0109	<0.01
Xylenols	M	2920	mg/kg	0.020		<0.015	<0.015	<0.015	< 0.020	< 0.020	<0.015	<0.015	< 0.020	<0.015	<0.015	<0.015	<0.015	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	< 0.020	< 0.020	< 0.020	< 0.020	0.18	< 0.020	< 0.020	< 0.020	<0.015	<0.015
1-Naphthol	N	2920	mg/kg	0.020					< 0.020	< 0.020			< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020							< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
Trimethylphenols	M	2920	mg/kg	0.020					< 0.020	< 0.020			< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020							< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020		
Total Phenols	M	2920	mg/kg	0.10		<0.035	<0.035	<0.035	< 0.10	< 0.10	<0.035	<0.035	< 0.10	<0.035	<0.035	<0.035	<0.035	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	< 0.10	< 0.10	< 0.10	< 0.10	0.57	< 0.10	< 0.10	< 0.10	<0.035	<0.035

*LOD used where < LOD is recorded.

Below screening value

Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:
Quotation No.: Q21-24056	Chemtest Sample ID.:
Project: P18-669	

Fill Material Samples (columns 210206-39 to 22-31543); Surface Validation Samples (columns 22-34126 to 22-35446)

Client: Rodgers Leask Environmental — Quotation No.: Q21-24056

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	210206-39	210206-39	210127-42	210127-42	21-41336	21-41336	210114-156	22-31543	22-18735
Sample ID.:										1326717	1326718		1490069	1432305
Client Sample Ref.:						S19-1	S19-2	R19-1	R19-2	AM31-1	AM30-1	AU28-1	AU32-1	AP23-1
Sample Type:						SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	SOLID	SOIL	SOIL
Top Depth (m):						1.00-1.00	2.00-2.00	0.40-0.40	1.20-1.20	1.1	0.4	0.50-0.50	0.30	1.50
Bottom Depth (m):														
Date Sampled:						04/02/2021	04/02/2021	26/01/2021	26/01/2021	19-Nov-2021	19-Nov-2021	13/01/2021	16-Aug-2022	18-May-2022
Asbestos Lab:											COVENTRY		DURHAM	
ACM Type	U	2192		N/A								-	-	
Asbestos Identification	U	2192		N/A		-	Detected	-	Not Detected	Not Detected		-	No Asbestos Detected	
Asbestos Quantification Total			%			-	<0.001	-	-	-				
Moisture	N	2030	%	0.020		14	16	17	7.4	8.9	3.6	13	1.9	22.0
Soil Colour	N	2040		N/A		Dark Brown	Dark Brown	Dark Brown	Dark Brown	Brown	Brown	Dark Brown	Grey	Brown
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones and Roots
Soil Texture	N	2040		N/A						Sand	Sand		Gravel	Sand
pH	M	2010		4.0		10.1	11	9.86	10.9	11.9	> 12.0	9.07	7.6	8.5
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	<1	<1	<1	<1	0.7	3.9	<1	< 0.50	4.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	<12	<12	<12	<12	< 0.50	1	<12	34	180
Iron (Total)	N	2430	mg/kg	100	349148.01	34500	47100	160000	25700	21000	21000	53200	53000	15000
Arsenic	M	2450	mg/kg	1.0	2902.688	7.62	9.93	14.7	7.6	17	41	7.86	24	4.8
Cadmium	M	2450	mg/kg	0.10	83.661	0.459	<0.2	1.27	0.261	< 0.10	0.4	<0.02	5.4	0.24
Chromium	M	2450	mg/kg	1.0	10806.907	51	123	21	32	200	1000	26.5	190	11
Manganese	M	2450	mg/kg	5.0	38175.69	3280	8070	5620	2130	11000	39000	4440	6400	230
Copper	M	2450	mg/kg	0.50	516.883	<14	28	22.9	14.3	18	81	15.2	130	6.7
Mercury	M	2450	mg/kg	0.10	150.809	<1	<1	<1.4	<1.4	0.5	2.7	<0.14	8.7	< 0.05
Nickel	M	2450	mg/kg	0.50	13188.601	11.7	18.1	12.5	14.2	10	28	14.6	41	9.4
Lead	M	2450	mg/kg	0.50	18032.071	66.1	64.8	182	18.2	24	180	37.6	72	17
Selenium	M	2450	mg/kg	0.20	804.305	<10	<10	<10	<10	< 0.20	< 0.20	1.61	0.4	0.46
Vanadium	U	2450	mg/kg	5.0	1840.198	57.3	134	82.8	72.5	210	780	60.3	200	15
Zinc	M	2450	mg/kg	0.50	157599.516	88.3	113	461	55.5	53	110	136	820	39
Organic Matter	M	2625	%	0.40		62.9	33.6	4.53	5.74	2.4	2.1	3.28	12	7.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	83.664	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	411.626	<0.01	0.0298	<0.01	0.0162	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	3254.98	<0.01	0.0393	<0.01	0.0324	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	25838.23	2.78	<1	<1	<1	< 1.0	< 1.0	<1	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	515488.601	6.67	1.8	<1	<1	< 1.0	< 1.0	<1	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	64895263.78	19.8	9.37	6.89	<1	6.2	< 1.0	1.19	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64895263.78	42.5	32.1	25.8	<1	< 1.0	< 1.0	9.02	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	64895263.78	6.51	8.59	4.97	<1	< 1.0	< 1.0	1.37	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0		78.2	52.2	38.8	<5	6.2	< 5.0	11.7	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	9.752	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	202.89	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	164.594	<0.01	0.0262	<0.01	0.0216	< 1.0	< 1.0	<0.01	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	259.933	4.81	2.53	<1	<1	< 1.0	< 1.0	<1	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	517.061	12.4	4.92	<1	<1	< 1.0	< 1.0	<1	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	1631.673	48.4	19.7	<1	<1	< 1.0	< 1.0	2.34	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	100	38.2	11.9	<1	< 1.0	< 1.0	17.4	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	12949.875	4.81	2.88	<1	<1	< 1.0	< 1.0	1.34	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		171	68.3	13.9	<5	< 5.0	< 5.0	21	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		249	121	52.7	<10	< 10	< 10	32.7	< 10	< 10
Benzene	M	2760	µg/kg	1.0	4358	<180	<180	<180	<180	< 1.0	< 1.0	<180	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	147182	<140	<140	<140	<140	< 1.0	< 1.0	<140	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	92030	<80	<80	<80	<80	< 1.0	< 1.0	<80	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		<200	<200	<200	<200	< 1.0	< 1.0	<200	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		<200	<200	<200	<200	< 1.0	< 1.0	<200	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		<200	<200	<200	<200	< 1.0	< 1.0	<200	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	31.45	3.27	3.63	0.178	0.0195	< 0.10	< 0.10	<0.009	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	19.168	1.81	5.69	0.0358	<0.012	< 0.10	< 0.10	<0.012	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	34.073	0.184	0.415	0.0159	<0.008	< 0.10	< 0.10	<0.008	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	31.077	1.22	6.78	0.0372	<0.01	< 0.10	< 0.10	<0.01	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	31.077	11.8	36.4	0.282	0.0467	< 0.10	0.38	<0.015	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	39.119	2.37	7.66	0.0602	<0.016	< 0.10	0.26	<0.016	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	7.614	16.9	42	0.332	0.0412	0.84	0.74	<0.017	< 0.10	0.32
Pyrene	M	2800	mg/kg	0.10	87.557	12	28.9	0.27	0.0318	0.89	0.58	<0.015	< 0.10	0.24
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	7.07	13.7	0.182	0.0242	0.69	0.42	<0.014	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	711.578	6.69	12	0.174	0.0248	0.77	0.55	<0.01	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	8.55	15.7	0.281	0.0225	1.1	0.48	<0.015	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	3.23	5.31	0.0833	<0.014	0.5	0.18	<0.014	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	5.23	10.1	0.16	0.0202	0.93	0.13	<0.015	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	3.04	7	0.158	<0.018	< 0.10	< 0.10	<0.018	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	959.886	0.811	1.17	0.0299	<0.023	< 0.10	< 0.10	<0.023	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	15.229	3.23	6.44	0.123	<0.024	< 0.10	< 0.10	<0.024	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		87.3	203	2.4	0.231	5.7	3.7	<0.118	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020						< 0.020	< 0.020		< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	3.497	0.0116	<0.01	<0.01	<0.01	< 0.020	< 0.020	<0.01	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		0.0116	0.0119	<0.01	<0.01	< 0.020	< 0.020	<0.01	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		<0.015	<0.015	<0.015	<0.015	< 0.020	< 0.020	<0.015	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020						< 0.020	< 0.020		< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020						< 0.020	< 0.020		< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		<0.035	<0.035	<0.035	<0.035	< 0.10	< 0.10	<0.035	< 0.10	< 0.10

Determinand	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101	22-16661	22-31543	Upper 95th Percentile Surface Validation Samples
Sample ID.:									1423057	1490066	
Client Sample Ref.:	W213-1	W213-2	W213-3	W213-4	W213-5	W213-6	W213-7	W213-8	R160-1	AQ23-2	
Sample Type:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL	
Top Depth (m):	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20	0.20-0.20		1.00	
Bottom Depth (m):											
Date Sampled:	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	04/05/2022	16/08/2022	
Asbestos Lab:									COVENTRY		
ACM Type									Fibres/Clumps		
Asbestos Identification	Not Detected	-	Not Detected	-	Not Detected	-	Not Detected	-	Chrysotile		
Asbestos Quantification Total									0.006		
Moisture	13	12	18	9.8	13	14	14	11	7.9	2.3	
Soil Colour	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Brown	Brown	
Other Material	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	
Soil Texture									Sand	Gravel	
pH	8.9	8.74	8.59	8.63	8.86	8.56	8.68	10.7	9.5	7.8	
Cyanide (Total)	<1	2.04	<1	<1	<1	1.43	<1	<1	0.9	< 0.50	2.1
Ammoniacal Nitrogen	<12	<12	<12	<12	<12	<12	<12	<12	2.6	6.7	11.15
Iron (Total)	65400	52400	76900	33400	45900	86800	86900	105000	46000	58000	79750
Arsenic	14.4	13.1	20.2	9.93	67	14.6	13	6.51	7.7	5.7	17.5
Cadmium	1.11	0.356	1.39	<0.2	0.577	0.326	1.39	<0.2	1.1	< 0.10	1.09
Chromium	59.7	50	68.5	34.2	18.6	111	162	267	63	28	210
Manganese	4490	2850	4420	2050	657	5460	12000	12600	5300	1100	8425
Copper	31.8	81.9	30.7	27.8	91.4	29.7	26.3	20.8	19	9.1	35.75
Mercury	<0.1	<1	<0.1	<1	<0.1	<1	<0.1	<1	0.19	< 0.05	0.255
Nickel	21.7	27.2	31.9	18.9	24.5	28.5	19.3	13.3	16	18	36
Lead	90.7	142	121	42.6	253	174	85.1	54.2	240	28	117.5
Selenium	1.1	<10	<1	<10	<1	<10	3.36	<10	2.3	< 0.25	1.975
Vanadium	61.6	91.2	142	45.4	34	164	385	380	91	36	182.5
Zinc	267	376	401	103	207	400	278	141	460	100	337.5
Organic Matter	6.74	7.69	6.02	22.2	8.21	7.55	7.76	25.2	10	1.8	28.5
Aliphatic TPH >C5-C6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aliphatic TPH >C6-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aliphatic TPH >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aliphatic TPH >C10-C12	<1	<1	<1	3.27	<1	<1	<1	<1	< 1.0	< 1.0	1
Aliphatic TPH >C12-C16	<1	<1	<1	11.3	<1	<1	<1	3.16	< 1.0	< 1.0	1
Aliphatic TPH >C16-C21	1.15	3.67	1.62	50.5	1.73	1.41	1.16	17.3	< 1.0	< 1.0	1
Aliphatic TPH >C21-C35	4.52	10.7	11.7	2660	6.16	10.5	8.8	42.2	180	< 1.0	1
Aliphatic TPH >C35-C44	<1	<1	2.07	319	<1	1.14	<1	12	< 1.0	< 1.0	1
Total Aliphatic Hydrocarbons	6.44	14.9	15.7	3040	8.34	13.3	10.6	74.9	180	< 5.0	5
Aromatic TPH >C5-C7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aromatic TPH >C7-C8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aromatic TPH >C8-C10	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	< 1.0	< 1.0	1
Aromatic TPH >C10-C12	<1	<1	<1	<1	<1	<1	<1	9.95	< 1.0	< 1.0	1
Aromatic TPH >C12-C16	1.97	<1	<1	4.44	<1	<1	1.23	6.32	< 1.0	< 1.0	1
Aromatic TPH >C16-C21	20.1	4.8	7.8	15.3	7.29	10.7	9.35	33.4	< 1.0	< 1.0	21
Aromatic TPH >C21-C35	108	35.7	40.2	24.8	183	55	38.1	93.2	< 1.0	< 1.0	69.5
Aromatic TPH >C35-C44	10.2	12.4	4.94	<1	5.27	6.29	2.87	10.4	< 1.0	< 1.0	1
Total Aromatic Hydrocarbons	141	53.2	53.8	46.2	196	72.6	51.8	153	< 5.0	< 5.0	84.5
Total Petroleum Hydrocarbons	147	68	69.5	3090	204	85.9	62.5	228	180	< 10	84.5
Benzene	<180	<180	<180	<180	<180	<180	<180	<180	74	< 1.0	10.675
Toluene	<140	<140	<140	<140	<140	<140	<140	<140	11	< 1.0	5.325
Ethylbenzene	<80	<80	<80	<80	<80	<80	<80	<80	1.7	< 1.0	1
m & p-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	3.9	< 1.0	3.4
o-Xylene	<200	<200	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	1.15
Methyl Tert-Butyl Ether	<200	<200	<200	<200	<200	<200	<200	<200	< 1.0	< 1.0	1
Naphthalene	0.181	0.16	0.304	0.431	<0.009	0.248	0.307	8.43	5.6	< 0.10	4.5
Acenaphthylene	0.137	0.215	0.265	0.277	<0.012	0.195	0.201	1.29	1.5	< 0.10	1.07
Acenaphthene	0.23	0.121	0.334	0.0211	<0.008	0.0997	<0.008	0.268	0.49	< 0.10	0.53
Fluorene	0.212	0.236	0.439	0.198	<0.01	0.141	0.125	0.838	1.7	< 0.10	0.8475
Phenanthrene	1.74	1.8	2.92	1.94	0.989	1.09	0.99	5.74	12	< 0.10	5.9
Anthracene	0.452	1.11	0.808	0.478	<0.016	0.314	0.289	1.81	2.5	< 0.10	1.725
Fluoranthene	4.59	12.7	5.25	3.7	1.98	2.66	2.6	8.49	20	< 0.10	10.75
Pyrene	3.61	10.4	3.73	2.58	1.51	2.04	1.97	6.29	15	< 0.10	8.1
Benzo[a]anthracene	2.58	9.05	2.9	1.1	1.12	1.66	1.36	3.52	8.8	< 0.10	5.275
Chrysene	2.41	9.16	2.6	0.982	1.11	1.51	1.44	3.58	8.6	< 0.10	5.375
Benzo[b]fluoranthene	3.85	12.3	4.25	1.4	1.85	2.67	2.26	4.87	13	< 0.10	7.9
Benzo[k]fluoranthene	1.48	4.19	1.27	0.476	0.606	0.961	0.772	1.6	4.3	< 0.10	2.5
Benzo[a]pyrene	2.31	7.01	2.44	0.779	0.954	1.64	1.27	3.22	9.4	< 0.10	6.225
Indeno(1,2,3-c,d)Pyrene	1.73	4.94	1.93	0.69	0.792	1.34	1.09	2.53	6.7	< 0.10	4.325
Dibenz(a,h)Anthracene	0.337	1.05	0.362	0.124	<0.023	0.23	0.276	0.549	1.4	< 0.10	0.89
Benzo[g,h,i]perylene	1.45	3.81	1.57	0.581	0.686	1.14	0.99	2.31	5.7	< 0.10	4
Total Of 16 PAH's	27.3	78.2	31.4	15.8	11.6	17.9	15.9	55.3	120	< 2.0	65
Resorcinol									< 0.020	< 0.020	0.02
Phenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0113	< 0.020	< 0.020	0.02
Cresols	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0113	< 0.020	< 0.020	0.02
Xylenols	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	<0.015	< 0.020	< 0.020	0.02
1-Naphthol									< 0.020	< 0.020	0.02
Trimethylphenols									< 0.020	< 0.020	0.02
Total Phenols	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	<0.035	< 0.10	< 0.10	0.1

Determinand	22-34126	22-34126	22-42945	22-42945	22-42945	22-42945	22-34126	22-34126	22-34996	22-34996	22-34996	22-34996	22-35446	22-35446
Sample ID.:	1501688	1501689	1541583	1541584	1541585	1541586	1501690	1501691	1505521	1505522	1505523	1505524	1507545	1507546
Client Sample Ref.:	5E1-SV1	5E1-SV2	5E1-SV2-N	5E1-SV2-S	5E1-SV2-E	5E1-SV2-W	5E1-SV3	5E1-SV4	5e1-SV5	5e1-SV6	5e1-SV7	5e1-SV8	5E1-SV9	5E1-SV10
Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Top Depth (m):	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2					0.2	0.2
Bottom Depth (m):			0.2	0.2	0.2	0.2								
Date Sampled:	05-Sep-2022	05-Sep-2022	08-Nov-2022	08-Nov-2022	08-Nov-2022	08-Nov-2022	05-Sep-2022	05-Sep-2022	08-Sep-2022	08-Sep-2022	08-Sep-2022	08-Sep-2022	14-Sep-2022	14-Sep-2022
Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	NEW-ASB	NEW-ASB
ACM Type	-	Fibres/Clumps	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	No Asbestos Detected	Chrysotile	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 Quantification Total		0.044												
Moisture	4.8	5.7					6.8	5.7	5.4	8.0	8.3	4.1	7.5	7.9
Soil Colour	Black	Black					Brown	Brown	Grey	Grey	Grey	Brown	Brown	Brown
Other Material	Stones	Stones					Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones and Roots	Stones
Soil Texture	Sand	Sand					Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	8.4	9.8					8.7	8.4	9.2	8.9	8.8	9	9.1	9
Cyanide (Total)	0.5	1.1					2.1	1.5	< 0.50	1.4	2.1	0.6	1.8	1.6
Ammoniacal Nitrogen	1.4	2.1					4.4	1.7	6.1	1.5	1.2	1.4	4.1	1.6
Iron (Total)	62000	75000					52000	120000	76000	57000	57000	57000	67000	50000
Arsenic	5	< 0.5					8.8	12	9.8	5.4	5.7	10	18	12
Cadmium	0.18	< 0.10					0.32	0.24	0.43	0.22	0.31	0.41	0.76	0.51
Chromium	450	< 0.5					72	180	60	33	51	52	82	51
Manganese	12000	9.7					3500	6400	3200	1600	2100	2200	4800	2900
Copper	19	< 0.50					16	66	22	11	14	36	35	20
Mercury	0.1	< 0.05					0.13	0.08	0.09	0.08	0.1	0.08	0.24	0.22
Nickel	38	< 0.50					17	44	16	9.9	14	18	27	21
Lead	29	< 0.50					50	33	52	31	57	57	120	65
Selenium	1.4	< 0.25					1.3	1.5	1.4	0.68	1	1.2	1.9	1.4
Vanadium	230	< 0.5					99	130	85	46	57	64	150	64
Zinc	79	< 0.50					150	76	120	84	100	140	270	160
Organic Matter	25	18					15	22	23	19	19	20	13	29
Aliphatic TPH >C5-C6	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	< 5.0	< 5.0					< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	< 1.0	< 1.0					23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	< 1.0	< 1.0					59	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	< 5.0	< 5.0					83	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	< 10	< 10					83	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	3.6	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	1.4	< 1.0					1.7	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	< 0.10	2.5					4.2	1.5	2.5	2.7	3.5	2.6	< 0.10	1.8
Acenaphthylene	< 0.10	0.46					0.82	0.33	0.33	0.48	0.98	0.44	< 0.10	0.48
Acenaphthene	< 0.10	0.21					0.17	0.18	0.16	0.18	0.24	0.76	< 0.10	0.2
Fluorene	< 0.10	0.38					0.43	0.32	0.34	0.42	0.54	0.93	< 0.10	0.34
Phenanthrene	1.2	2.2					2.3	1.8	1.9	2.6	3	5.9	0.71	1.9
Anthracene	0.49	0.81					1.1	0.63	0.74	0.84	1.3	1.8	0.5	0.68
Fluoranthene	2.5	4.6					5.3	3.8	3.1	4.4	6.7	8.7	2.5	3.9
Pyrene	1.9	3.5					5.3	2.9	2.7	3.3	5.8	6.4	2.1	3.4
Benzo[a]anthracene	1.1	2.1					3.5	1.5	1.8	2.3	4.9	3.3	1.3	2.3
Chrysene	1.5	2.8					4.5	2	1.6	2.3	5.3	3.5	1.4	2.6
Benzo[b]fluoranthene	1.5	2.9					5.2	2.1	2.8	4	7.6	4.9	1.8	4
Benzo[k]fluoranthene	0.46	1					1.8	0.76	0.87	1.3	2.5	1.6	0.63	1.3
Benzo[a]pyrene	0.99	1.9					3.9	1.4	1.9	3.2	5.7	3.5	1.3	2.6
Indeno(1,2,3-c,d)Pyrene	< 0.10	1.6					3.1	< 0.10	1.3	2	4.1	2.4	0.95	< 0.10
Dibenz(a,h)Anthracene	< 0.10	0.4					0.64	< 0.10	0.33	0.4	0.93	0.59	0.17	< 0.10
Benzo[g,h,i]perylene	< 0.10	1.7					3.1	< 0.10	1.3	2	4	2.4	0.84	< 0.10
Total Of 16 PAH's	12	29					45	19	24	32	57	50	14	26
Resorcinol	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	< 0.020	< 0.020					< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	< 0.10	< 0.10					< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

*LOD used where < LOD is recorded.

Below screening value

Above screening value

Client: Rodgers Leask Environmental	Chemtest Job No.:				
Quotation No.: Q21-24056	Chemtest Sample ID.:				
Project: P18-669					
Client: Rodgers Leask Environmental	Job No.:				
Quotation No.: Q21-24056	Sample ID.:				
	Client Sample Ref.:				
	Sample Type:				
	Top Depth (m):				
	Bottom Depth (m):				
	Date Sampled:				
	Asbestos Lab:				

Determinand	Accred.	SOP	Units	LOD	Re-use Screening Criteria 40% Infiltration of Incident Rainfall for Residential Areas	Surface Validation Samples																Upper 95th Percentile Natural deposits	Exposed Natural Validation Samples									
						22-35770	22-35770	22-35770	22-36111	22-36111	22-36111	22-36111	22-37311	22-37311	22-37311	22-37311	22-37311	22-37307	22-37307	22-37307	22-37307		22-20938	22-20938	22-20938	22-31543	22-31543	22-26760	22-20938	22-24643	21-41336	22-19583
						1508865	1508866	1508867	1510439	1510440	1510441	1510442	1515791	1515792	1515793	1515794	1515795	1515774	1515775	1515776	1515777		1442556	1442557	1442558	1490081	1490080	1468360	1442555	1458824	1326708	1435996
						5ES-SV11	5E1-SV12	5E1-SV13	5E1-SV14	5E1-SV15	5E1-SV16	5E1-SV17	5E1-SV18	5E1-SV19	5E1-SV20	5E1-SV21	5E1-SV22	5E1-SV23	5E1-SV24	5E1-SV25	5E1-SV26		AN25-C	AP29-C	AO25-C	AJ22-C	AS27-C	AO28-C	AN29-C	AQ30-C	AR30-1	AJ29-C
						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
						0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20		0.5	0.5	0.5				0.5	-	0.5	-
																													-		
						15-Sep-2022	15-Sep-2022	15-Sep-2022	20-Sep-2022	20-Sep-2022	20-Sep-2022	20-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022		06-Jun-2022	06-Jun-2022	06-Jun-2022	16-Aug-2022	16-Aug-2022	13-Jul-2022	06-Jun-2022	29-Jun-2022	19-Nov-2021	24-May-2022
						DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	COVENTRY	COVENTRY	COVENTRY	COVENTRY		-	DURHAM			DURHAM	DURHAM	DURHAM	COVENTRY	COVENTRY	DURHAM
ACM Type	U	2192		N/A		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected		-	No Asbestos Detected	-	-	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	-	No Asbestos Detected
Asbestos Quantification Total			%																				-		-	-						
Moisture	N	2030	%	0.020		5.2	3.8	6.6	6.3	5.4	5.6	5.3	6.2	6.0	5.0	6.6	6.1	4.9	5.2	4.7	3.7		33.0	34	31	10.0	15	26.0	28	25	11	25
Soil Colour	N	2040		N/A		Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown		Black	Black	Black	Grey	Brown	Grey	Grey	Brown	Brown	Grey
Other Material	N	2040		N/A		Stones	Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones and Roots	Roots and Stones	Stones	Stones	Stones	Stones		None	None	None	None	None	Stones	None	None	Stones	Stones
Soil Texture	N	2040		N/A		Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand		Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Sand	Clay
pH	M	2010		4.0		10.3	9.2	9.5	9.1	9	9.2	9.2	9.1	9.2	9.5	9	9.1	9.2	9.1	9.2	8.9		8.7	8.6	8.5	8.2	8.2	8.5	8.7	9.1	10.7	8.1
Cyanide (Total)	M	2300	mg/kg	0.50	2.313	1.2	0.9	1.7	1	1.6	1.5	0.9	1.6	2.1	5.1	1.4	1.1	0.7	1.3	1.7	1.3	0.995	< 0.50	< 0.50	< 0.50	1.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	176.983	12	6.8	8.6	2.5	1.4	< 0.50	2.6	1.1	1.6	0.55	14	0.93	1.7	1.6	0.86	0.86	185.5	58	130	190	36	38	180	120	86	< 0.50	50
Iron (Total)	N	2430	mg/kg	100	349148.01	37000	52000	21000	37000	35000	50000	60000	41000	52000	61000	30000	52000	40000	35000	59000	81000	36600	26000	26000	29000	25000	42000	28000	30000	21000	7500	22000
Arsenic	M	2450	mg/kg	1.0	2902.688	7	9.2	16	15	19	14	14	6.2	8.6	9	7.9	7.1	6.8	5.7	9.7	10	14.55	3.7	5.3	14	3.4	3.3	13	11	9.2	15	14
Cadmium	M	2450	mg/kg	0.10	83.661	0.37	0.54	0.6	0.49	1.9	0.65	1.2	0.26	0.35	0.55	0.3	0.39	0.28	0.18	0.63	0.65	0.1605	0.21	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	10806.907	47	52	73	55	40	59	65	71	100	160	38	73	30	29	98	220	28.55	21	18	26	7.4	12	29	19	22	19	28
Manganese	M	2450	mg/kg	5.0	38175.69	2900	3900	3900	3700	8500	4300	5200	3900	5600	7200	1700	3600	1900	1900	4900	8200	2078.5	430	210	380	830	370	380	240	200	3100	370
Copper	M	2450	mg/kg	0.50	516.883	15	25	27	22	22	33	32	11	16	27	21	18	12	13	34	25	17.6	8.8	7.6	8.1	11	4.3	9.6	5.8	8.3	23	8.4
Mercury	M	2450	mg/kg	0.10	150.809	0.19	0.23	0.17	0.2	0.12	0.94	0.26	0.08	0.12	0.24	0.11	0.11	0.07	0.05	0.2	0.15	0.0775	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.10	< 0.05
Nickel	M	2450	mg/kg	0.50	13188.601	11	18	24	22	21	30	23	11	18	20	17	15	12	9.8	29	23	26.65	19	16	21	8.5	11	28	18	18	8.3	25
Lead	M	2450	mg/kg	0.50	18032.071	54	82	99	71	110	91	140	27	45	77	36	61	37	28	87	86	35.95	14	13	17	49	11	20	15	16	7.5	18
Selenium	M	2450	mg/kg	0.20	804.305	1.1	1.5	2	1.9	1.7	1.8	4.8	0.96	1.5	1.6	1.1	1.5	1.3	0.99	1.6	1.4	0.8555	0.37	0.54	0.7	< 0.25	< 0.25	0.85	0.59	0.65	< 0.20	0.86
Vanadium	U	2450	mg/kg	5.0	1840.198	56	85	100	77	67	83	89	79	100	190	50	91	48	50	120	160	35.1	20	22	33	8.5	19	36	28	27	23	34
Zinc	M	2450	mg/kg	0.50	157599.516	140	210	220	170	610	250	360	86	110	250	74	140	87	73	260	250	66.15	52	45	55	36	31	72	47	59	24	58
Organic Matter	M	2625	%	0.40		7	6.3	20	18	8.9	16	8.4	26	9	8.9	12	12	27	30	9.4	13		2.2	4.3	2.2	0.97	0.67	4.1	2.4	2.4	0.69	1.6
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	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	< 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	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	< 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	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	< 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	25838.23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	515488.601	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	64895263.78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	110	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	64895263.78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	410	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	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	< 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	520	< 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	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	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	1.0	202.89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.1	< 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
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	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	1.0	259.933	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	517.061	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	1631.673	12	< 1.0	< 1.0	< 1.0	< 1.0	15	23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	12949.875	73	< 1.0	< 1.0	< 1.0	< 1.0	18	220	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	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	< 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		85	< 5.0	< 5.0	< 5.0	< 5.0	33	260	< 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	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		85	< 10	< 10	< 10	< 10	33	780	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	4358	< 1.0	1.9	< 1.0	6.7	2.6	5.2	15	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	147182	< 1.0	1	< 1.0	5.7	2.6	3	5.5	4.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	92030	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1	< 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	3.8	< 1.0	2.2	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
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	1.3	< 1.0	< 1.0	1.2	< 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
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	31.45	0.31	5.1	3.1	< 0.10	1.4	2.5	4.6	1.5	2.6	0.84	< 0.10	3.1	< 0.10	0.93	1.9	1.6	0.1	< 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	19.168	0.56	1.2	0.7	< 0.10	0.33	0.59	1.1	0.38	0.56	0.34	< 0.10	0.65	< 0.10	0.28	0.68	0.55	0.1	< 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	34.073	0.17	0.62	0.26	< 0.10	0.21	0.19	0.17	0.22	0.13	0.1	< 0.10	0.13	< 0.10	0.12	0.17	0.16	0.1	< 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	31.077	0.5	1.1	0.58	< 0.10	0.4	0.47	0.6	0.4	0.34	0.34	< 0.10	0.37	< 0.10	0.25	0.57	0.43	0.1	< 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	31.077	8.3	5.9	4.9	1.3	2.8	2.5	5.5	1.7	2.8	2.7	1	2.1	1.1	1.5	4.3	4.7	1.51	1.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10
Anthracene	M	2800	mg/kg	0.10	39.119	1.3	1.8	1.1	0.43	0.8	0.98	1.5	0.64	0.79	0.49	0.29	0.87	0.31	0.51	1.2	1.5	0.714	0.45	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.93	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	7.614	11	13	10	2.3	4.6	4.9	10	3.5	5.7	4	1.4	4.2	1.8	3.1	8.1	8.5	3.02	2.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.2	< 0.10
Pyrene	M	2800	mg/kg	0.10	87.557	7.8	9.3	7.7	1.9	3.7	4.1	8.2	2.9	4.2	2.9	1.1	3.7	1.5	2.4	5.8	6	2.455	2.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.4	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	695.38	3.8	5.9	4.9	1.2	1.8	3	5.4	2.2	3.1	1.7	0.87	3	0.95	1.9	3.9	3.7	1.375	1.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10
Chrysene	M	2800	mg/kg	0.10	711.578	4.2	6	5.4	1.2	1.8	3.1	5.3	2.1	3.2	1.3	1	3.1	1	2	3.7	3.7	1.275	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.914	5.7	8.4	8	1.8	3	4.4	7.3	3.4	5	2.2	1.2	4.3	1.4	3	5.6	5	1.375	1.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	5.79	2.2	2.6	2.5	0.6	1.1	1.5	2.5	1.1	1.6	0.61	0.4	1.4	0.48	0.85	1.9	1.7	0.579	0.75	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.37	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	39.489	4.2	6.4	6.4	1.4	2.3	3.4	5.3	2.4	3.8	1.6	0.94	3.4	1.2	2.3	4.4	4.1	1.3165	1.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.97	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	29.018	2.7	4.4	4.5	< 0.10	1.6	2.4	3.8	1.8	3.1	< 0.10	0.8	2.5	0.93	1.6	3.1	3.2	0.65	1.1	< 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	959.886	0.42	0.83	0.91	< 0.10	0.27	0.41	0.76	0.25	0.54	< 0.10	0.2	0.5	0.22	0.4	0.47	0.53	0.4135	0.67	< 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	15.229	2.5	4.3	4	< 0.10	1.5	2.1	3.3	1.5	2.6	< 0.10	0.68	2.2	0.69	1.5	2.5	2.5	0.65	1.1	< 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		56	77	65	12	28	37	65	26	40	19	9.9	36	12	23	48	48		17	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	13	< 2.0
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020	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	0.02	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 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	0.10		< 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

*LOD used where < LOD is recorded.

Below screening value
Above screening value

Phase 5e1 - Material Tracking

20/04/22 - AJ23, AJ24, AJ25, AK23, AK24, AK25, AL23, AL24, AL25				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 11 - 300	6.30	R-CSP	0.75	2.25
Layer 10 - 300	6.00	5E1-SP1	0.4	1.2
Layer 9 - 300	5.70	3CP2	0.6	1.8
Layer 8 - 300	5.40	AP25/AP26	1.5	4.5
Layer 7 - 300	5.10	AP21/AP22	0	0
Layer 6 - 300	4.80	R146	1	3
Layer 5 - 300	4.50	AH30	0.8	2.4
Layer 4 - 300	4.20	AH29	0.8	2.4
Layer 3 - 300	3.90	W204	0.7	2.1
Layer 2 - 300	3.60	W204	0.7	2.1
Layer 1 - 400	3.30	W204	0.7	2.1
Clay Level	2.90	Total Heave		23.85

21/04/2022 - AM23, AM24, AM25, AN24, AO24				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 11 - 300	6.30	R-CSP	0.75	2.25
Layer 10 - 300	6.00	5E1-SP1	0.4	1.2
Layer 9 - 300	5.70	3CP2	0.6	1.8
Layer 8 - 300	5.40	AP25/AP26	1.5	4.5
Layer 7 - 300	5.10	AP21/AP22	0	0
Layer 6 - 300	4.80	R147	0	0
Layer 5 - 300	4.50	AH30	0.8	2.4
Layer 4 - 300	4.20	AH29	0.8	2.4
Layer 3 - 300	3.90	W204	0.7	2.1
Layer 2 - 300	3.60	W204	0.7	2.1
Layer 1 - 300	3.30	W204	0.7	2.1
Clay Level	2.90	Total Heave		20.85

05/05/2022 - AK21, AL21, AM21, AK22, AL22, AM22				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.10	AI31	0.5	1.5
Layer 9 - 300	5.80	AL24	3.6	10.8
Layer 8 - 300	5.50	5E1-SP1-2	#N/A	#N/A
Layer 7 - 300	5.20	AL24	3.6	10.8
Layer 6 - 300	4.90	AI30	0.6	1.8
Layer 5 - 300	4.60	5E1-SP1-3	#N/A	#N/A
Layer 4 - 300	4.30	AH31	0	0
Layer 3 - 300	4.00	AI31	0.5	1.5
Layer 2 - 300	3.70	AO29	0.5	1.5
Layer 1 - 300	3.40	AI31	0.5	1.5
Clay Level	3.10	Total Heave		#N/A

09/05/2022 -AH29, AH30, AH31, AI29, AI30, AI31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	6.00	AK30	0.26	0.78
Layer 7 - 300	5.70	AL31	0.2	0.6
Layer 6 - 300	5.40	AN23 (after screening)	7	21
Layer 5 - 300	5.10	5E1-SP1	0.4	1.2
Layer 4 - 300	4.80	AM30	0.1	0.3
Layer 3 - 300	4.50	AM31	0.2	0.6
Layer 2 - 300	4.20	AL30	1	3
Layer 1 - 300	3.90	AL30/AL31	4.7	14.1
Clay Level	3.60	Total Heave		41.58

09/05/2022 (2) -AM22				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	6.10	AL24	3.6	10.8
Layer 7 - 300	5.80	AP22 (after screening)	0	0
Layer 6 - 300	5.50	AM31	0.2	0.6
Layer 5 - 300	5.20	AL31	0.2	0.6
Layer 4 - 300	4.90	AI31	0.5	1.5
Layer 3 - 300	4.60	AI31	0.5	1.5
Layer 2 - 300	4.30	AH31	0	0
Layer 1 - 300	4.00	AH31	0	0
Clay Level	3.70	Total Heave		15

10/05/2022 - AH28. AI28				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 6 - 300	6.00	AM31	0.2	0.6
Layer 5 - 300	5.70	AL31	0.2	0.6
Layer 4 - 300	5.40	AL30	1	3
Layer 3 - 300	5.10	AM32	0.2	0.6
Layer 2 - 300	4.80	AL30	1	3
Layer 1 - 300	4.50	AK31	4.7	14.1
Clay Level	4.20	Total Heave		21.9

13/05/2022 - AL30, AM30				
Layer Thickness (mm)	Level (mAOD)	Source		
Layer 9 - 300	6.70	R-CSP-8		
Layer 8 - 300	6.40	AP31		
Layer 7 - 300	6.10	AL30		
Layer 6 - 300	5.80	5E1-SP2		
Layer 5 - 300	5.50	AK31		
Layer 4 - 300	5.20	AP30	Cyanide	2.7 mg/kg
Layer 3 - 300	4.90	AO30	Cyanide	3.6 mg/kg
Layer 2 - 300	4.60	AP30	Cyanide	2.7 mg/kg
Layer 1 - 300	4.30	AK31		
Clay Level	4.00	Total Heave		0

19/05/2022 - AJ31, AK31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 9 - 300	5.90	AL29	1	3
Layer 8 - 300	5.60	5E1-SP1	0.4	1.2
Layer 7 - 300	5.30	AM31	0.2	0.6
Layer 6 - 300	5.00	AM30	0.1	0.3
Layer 5 - 300	4.70	AI30	0.6	1.8
Layer 4 - 300	4.40	AL30 (after screening)	1	3
Layer 3 - 300	4.10	W-206	0.25	0.75
Layer 2 - 300	3.80	AK30	0.26	0.78
Layer 1 - 300	3.50	AK32	4.7	14.1
Clay Level	3.20	Total Heave		25.53

20/05/2022 - AO30, AO31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	7.10	R-CSP-8	0.75	2.25
Layer 11 - 300	6.80	AJ29	0.2	0.6
Layer 10 - 300	6.50	A025	#N/A	#N/A
Layer 9 - 300	6.20	AO30	0.1	0.3
Layer 8 - 300	5.90	AJ30	0.26	0.78
Layer 7 - 300	5.60	AI30	0.6	1.8
Layer 6 - 300	5.30	AS29	2.1	6.3
Layer 5 - 300	5.00	AV35	3.8	11.4
Layer 4 - 300	4.70	AO26	1.4	4.2
Layer 3 - 300	4.40	AK30	0.26	0.78
Layer 2 - 300	4.10	AL30	1	3
Layer 1 - 300	3.80	W206	0.25	0.75
Clay Level	3.50	Total Heave		#N/A

20/05/2022 - AM21, AN21, AO21, AN22, AO22				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.10	AN23	7	21
Layer 9 - 300	5.80	AP22	0	0
Layer 8 - 300	5.50	AP31	1.3	3.9
Layer 7 - 300	5.20	AL29	1	3
Layer 6 - 300	4.90	AQ31	0.9	2.7
Layer 5 - 300	4.60	AM29	1	3
Layer 4 - 300	4.30	AL30	1	3
Layer 3 - 300	4.00	AL30	1	3
Layer 2 - 300	3.70	AO30	0.1	0.3
Layer 1 - 300	3.40	W206	0.25	0.75
Clay Level	3.10	Total Heave		40.65

23/05/2022 - AL29, AM29				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 9 - 300	6.70	R-CSP	0.75	2.25
Layer 8 - 300	6.40	AJ29	0.2	0.6
Layer 7 - 300	6.10	AJ29	0.2	0.6
Layer 6 - 300	5.80	AM29	1	3
Layer 5 - 300	5.50	AN29	0.5	1.5
Layer 4 - 300	5.20	AJ27	1.5	4.5
Layer 3 - 300	4.90	AM29	1	3
Layer 2 - 300	4.60	AL29	1	3
Layer 1 - 300	4.30	W206	0.25	0.75
Clay Level	4.00	Total Heave		19.2

25/05/2022 - AN23, AO23, AN24, AO24, AO25				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	6.60	R-CSP	0.75	2.25
Layer 11 - 300	6.30	AJ31	0.3	0.9
Layer 10 - 300	6.00	5E1-SP1	0.4	1.2
Layer 9 - 300	5.70	AK30	0.26	0.78
Layer 8 - 300	5.40	AK28	1.5	4.5
Layer 7 - 300	5.10	3CP2	0.6	1.8
Layer 6 - 300	4.80	5e1-SP2	0.1	0.3
Layer 5 - 300	4.50	AK22	0.24	0.72
Layer 4 - 300	4.20	AQ21	1.1	3.3
Layer 3 - 300	3.90	AK30	0.26	0.78
Layer 2 - 300	3.60	AJ30	0.26	0.78
Layer 1 - 300	3.30	AK29	0.26	0.78
Clay Level	3.00	Total Heave		18.09

26/05/2022 - AJ29, AK29, AJ30, AK30				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	6.40	R-CSP	0.75	2.25
Layer 7 - 300	6.10	AN29	0.5	1.5
Layer 6 - 300	5.80	AN32	1.7	5.1
Layer 5 - 300	5.50	AL29	1	3
Layer 4 - 300	5.20	AJ29	0.2	0.6
Layer 3 - 300	4.90	AJ27	1.5	4.5
Layer 2 - 300	4.60	AJ29	0.2	0.6
Layer 1 - 300	4.30	AL29	1	3
Clay Level	4.00	Total Heave		20.55

27/05/2022 - AJ27, AJ28				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	6.30	R-CSP	0.75	2.25
Layer 7 - 300	6.00	AN31	1.7	5.1
Layer 6 - 300	5.70	AQ30	0	0
Layer 5 - 300	5.40	AP31	1.3	3.9
Layer 4 - 300	5.10	AK29	0.26	0.78
Layer 3 - 300	4.80	AJ29	0.2	0.6
Layer 2 - 300	4.50	AK29	0.26	0.78
Layer 1 - 300	4.20	AJ30	0.26	0.78
Clay Level	3.90	Total Heave		14.19

07/06/2022 - AJ27, AJ28, AK27, AK28				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 9 - 300	6.10	R-CSP	0.75	2.25
Layer 8 - 300	5.80	AQ24	1.5	4.5
Layer 7 - 300	5.50	AQ31	0.9	2.7
Layer 6 - 300	5.20	AP31	1.3	3.9
Layer 5 - 300	4.90	AQ24	1.5	4.5
Layer 4 - 300	4.60	AO28	0	0
Layer 3 - 300	4.30	AO28	0	0
Layer 2 - 300	4.00	AJ29	0.2	0.6

07/06/2022 (2) - AP23, AP24, AM25, AN25, AO25, AP25, AM26, AN26, AO26, AP26				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	7.00	AM29	1	3
Layer 12 - 300	6.70	AN29	0.5	1.5
Layer 11 - 300	6.40	AQ22	0	0
Layer 10 - 300	6.10	5E1-SP1	0.4	1.2
Layer 9 - 300	5.80	W209	0.75	2.25
Layer 8 - 300	5.50	AQ22	0	0
Layer 7 - 300	5.20	AK28	1.5	4.5
Layer 6 - 300	4.90	3CP2	0.6	1.8
Layer 5 - 300	4.60	AM29	1	3
Layer 4 - 300	4.30	5e1-SP2	0.1	0.3
Layer 3 - 300	4.00	AL21	3.6	10.8
Layer 2 - 300	3.70	5e1-SP2	0.1	0.3

Layer 1 - 300	3.70	AJ27	1.5	4.5
Clay Level	3.40	Total Heave		22.95

Layer 1 - 300	3.40	5e1-SP1	0.4	1.2
Clay Level	3.10	Total Heave		29.85

09/06/2022 - ~AN29, AN30, AN31, AO28, AO29, AP28, AP29				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	7.00	R-CSP	0.75	2.25
Layer 12 - 300	6.70	AM29	1	3
Layer 11 - 300	6.40	AN29	0.5	1.5
Layer 10 - 300	6.10	W131	0.8	2.4
Layer 9 - 300	5.80	AO27	1.4	4.2
Layer 8 - 300	5.50	AL32	0.2	0.6
Layer 7 - 300	5.20	R159	0.1	0.3
Layer 6 - 300	4.90	AO30	0.1	0.3
Layer 5 - 300	4.60	AR29	0.1	0.3
Layer 4 - 300	4.30	AM29	1	3
Layer 3 - 300	4.00	AV37	0.2	0.6
Layer 2 - 300	3.70	AP30	1.3	3.9
Layer 1 - 300	3.40	AP31	1.3	3.9
Clay Level	3.10	Total Heave		26.25

13/06/2022 - AN27, AN28, AN29				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	6.60	AM29	1	3
Layer 11 - 300	6.30	AN29	0.5	1.5
Layer 10 - 300	6.00	AN29	0.5	1.5
Layer 9 - 300	5.70	AO27	1.4	4.2
Layer 8 - 300	5.40	AP30	1.3	3.9
Layer 7 - 300	5.10	AN33	0	0
Layer 6 - 300	4.80	R159	0.1	0.3
Layer 5 - 300	4.50	AM29	1	3
Layer 4 - 300	4.20	AV36	0.2	0.6
Layer 3 - 300	3.90	R160	0.6	1.8
Layer 2 - 300	3.60	AP30	1.3	3.9
Layer 1 - 300	3.30	AP28	0	0
Clay Level	3.00	Total Heave		23.7

15/06/2022 - AQ25, AQ26				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 14 - 300	6.70	AK28	1.5	4.5
Layer 13 - 300	6.40	AK27	1.5	4.5
Layer 12 - 300	6.10	AL28	1	3
Layer 11 - 300	5.80	AP23	1	3
Layer 10 - 300	5.50	AP25	#N/A	#N/A
Layer 9 - 300	5.20	W158	0.61	1.83
Layer 8 - 300	4.90	AQ25/AQ26	1.5	4.5
Layer 7 - 300	4.60	AO27	1.4	4.2
Layer 6 - 300	4.30	5E1-SP1	0.4	1.2
Layer 5 - 300	4.00	AK28	1.5	4.5
Layer 4 - 300	3.70	3CP2	0.6	1.8
Layer 3 - 300	3.40	AM29	1	3
Layer 2 - 300	3.10	AL28	1	3
Layer 1 - 300	2.80	AQ24	1.5	4.5
Clay Level	2.50	Total Heave		#N/A

17/06/2022 - AL27, AL28, AM27, AM28, AM29				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.50	R-CSP	0.75	2.25
Layer 9 - 300	6.20	AN30	0.1	0.3
Layer 8 - 300	5.90	AN30	0.1	0.3
Layer 7 - 300	5.60	AU36	1.4	4.2
Layer 6 - 300	5.30	3CP2	0.6	1.8
Layer 5 - 300	5.00	AJ29	0.2	0.6
Layer 4 - 300	4.70	AM29	1	3
Layer 3 - 300	4.40	AR31	0	0
Layer 2 - 300	4.10	AS29	2.1	6.3
Layer 1 - 300	3.80	AV35	3.8	11.4
Clay Level	3.50	Total Heave		30.15

17/06/2022 (2) - AP20, AP21, AQ20, AQ21, AR20, AR21				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 9 - 300	6.20	AR22	0	0
Layer 8 - 300	5.90	**W158**	0.61	1.83
Layer 7 - 300	5.60	3CP2	0.6	1.8
Layer 6 - 300	5.30	AT29	2.1	6.3
Layer 5 - 300	5.00	AK27	1.5	4.5
Layer 4 - 300	4.70	5E1-SP1	0.4	1.2
Layer 3 - 300	4.40	AQ31	0.9	2.7
Layer 2 - 300	4.10	AJ27	1.5	4.5
Layer 1 - 300	3.80	AM29	1	3
Clay Level	3.50	Total Heave		25.83

20/06/2022 - AS28, AS29, AT28, AT29				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.80	W213	0.8	2.4
Layer 9 - 300	6.50	W158	0.61	1.83
Layer 8 - 300	6.20	AR/AS 35	0.1	0.3
Layer 7 - 300	5.90	W208	0.5	1.5
Layer 6 - 300	5.60	W209	0.75	2.25
Layer 5 - 300	5.30	AS31	0	0
Layer 4 - 300	5.00	AS30	2.1	6.3
Layer 3 - 300	4.70	AQ28	0	0
Layer 2 - 300	4.40	AT31	0.3	0.9
Layer 1 - 300	4.10	AW37	0.2	0.6
Clay Level	3.80	Total Heave		16.08

20/06/2022 (2) - AL27, AM27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.40	AQ31	0.9	2.7
Layer 9 - 300	6.10	AR29	0.1	0.3
Layer 8 - 300	5.80	AR25/26	0.1	0.3
Layer 7 - 300	5.50	AR24	0	0
Layer 6 - 300	5.20	3CP2	0.6	1.8
Layer 5 - 300	4.90	3CP2	0.6	1.8
Layer 4 - 300	4.60	AJ30	0.26	0.78
Layer 3 - 300	4.30	AM29	1	3
Layer 2 - 300	4.00	AR29	0.1	0.3
Layer 1 - 300	3.70	AS31	0	0
Clay Level	3.40	Total Heave		10.98

21/06/2022 - AP28, AP29, AP30, AP31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300		AU31	0.3	0.9
Layer 7 - 300		3CP1	8.1	24.3
Layer 6 - 300		AS28	0	0
Layer 5 - 300		AQ28	0	0
Layer 4 - 300		AT30	2.1	6.3
Layer 3 - 300		AO29	0.5	1.5
Layer 2 - 300		AO28	0	0
Layer 1 - 300		AU36	1.4	4.2
Clay Level	3.54	Total Heave		37.2

22/06/2022 - AQ23, AQ24, AQ25				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	7.00	AS28	0	0
Layer 12 - 300	6.70	AS29	2.1	6.3
Layer 11 - 300	6.40	3CP1	8.1	24.3
Layer 10 - 300	6.10	AQ23	0	0
Layer 9 - 300	5.80	AQ22	0	0
Layer 8 - 300	5.50	AR24	0	0
Layer 7 - 300	5.20	AK34	0.3	0.9
Layer 6 - 300	4.90	3CP2	0.6	1.8
Layer 5 - 300	4.60	AS29	2.1	6.3
Layer 4 - 300	4.30	AQ24	1.5	4.5
Layer 3 - 300	4.00	AO28	0	0
Layer 2 - 300	3.70	AO28	0	0
Layer 1 - 300	3.40	AQ23	0	0
Clay Level	3.10	Total Heave		44.1

27/06/2022 - AI27, AJ27, AK27, AL27, AM27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	6.40	AK27	1.5	4.5
Layer 9 - 300	6.10	AK27	1.5	4.5
Layer 8 - 300	5.80	AS28	0	0
Layer 7 - 300	5.50	AR29	0.1	0.3
Layer 6 - 300	5.20	3CP2	0.6	1.8
Layer 5 - 300	4.90	AJ27	1.5	4.5
Layer 4 - 300	4.60	AM29	1	3
Layer 3 - 300	4.30	AR29	0.1	0.3
Layer 2 - 300	4.00	AS31	0	0
Layer 1 - 300	3.70	AK27	1.5	4.5
Clay Level	3.40	Total Heave		23.4

27/06/22 (2) - AP22, AQ22				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	6.20	AK27	1.5	4.5
Layer 11 - 300	5.90	AK27	1.5	4.5
Layer 10 - 300	5.60	AS28	0	0
Layer 9 - 300	5.30	AR29	0.1	0.3
Layer 8 - 300	5.00	3CP2	0.6	1.8
Layer 7 - 300	4.70	AJ27	1.5	4.5
Layer 6 - 300	4.40	AL28	1	3
Layer 5 - 300	4.10	AL33	4.7	14.1
Layer 4 - 300	3.80	3CP2	0.6	1.8
Layer 3 - 300	3.50	3CP2	0.6	1.8
Layer 2 - 300	3.20	AL28	1	3
Layer 1 - 300	2.90	AL28	1	3
Clay Level	2.60	Total Heave		42.3

28/06/2022 - AP20, AQ20				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	5.90	3CP2	0.6	1.8
Layer 7 - 300	5.60	AQ28	0	0
Layer 6 - 300	5.30	AT29	2.1	6.3
Layer 5 - 300	5.00	AK27	1.5	4.5
Layer 4 - 300	4.70	AK21	0.9	2.7
Layer 3 - 300	4.40	AR29	0.1	0.3
Layer 2 - 300	4.10	AJ27	1.5	4.5
Layer 1 - 300	3.80	An29	0.5	1.5
Clay Level	3.50	Total Heave		21.6

28/06/22 (2) - AQ28, AQ29, AQ30, AQ31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	7.00	R-CSP	0.75	2.25
Layer 12 - 300	6.70	AT29	2.1	6.3
Layer 11 - 300	6.40	AT29	2.1	6.3
Layer 10 - 300	6.10	AK27	1.5	4.5
Layer 9 - 300	5.80	AK21	0.9	2.7
Layer 8 - 300	5.50	AP27	0	0
Layer 7 - 300	5.20	AV31	0.2	0.6
Layer 6 - 300	4.90	AU31	0.3	0.9
Layer 5 - 300	4.60	AR28/AR29	1	3
Layer 4 - 300	4.30	AS29/AT29	2.1	6.3
Layer 3 - 300	4.00	AU28	0.15	0.45
Layer 2 - 300	3.70	AS30	2.1	6.3
Layer 1 - 300	3.40	AT30	2.1	6.3
Clay Level	3.10	Total Heave		45.9

07/07/2022 - AQ28, AR28, AR29, AR30				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
				0
Layer 12 - 300	7.00	AU28	0.15	0.45
Layer 11 - 300	6.70	AR29	0.1	0.3
Layer 10 - 300	6.40	W213	0.8	2.4
Layer 9 - 300	6.10	3CP2	0.6	1.8
Layer 8 - 300	5.80	AS28/AS29	2.1	6.3
Layer 7 - 300	5.50	AU28	0.15	0.45
Layer 6 - 300	5.20	AT29	2.1	6.3
Layer 5 - 300	4.90	AU28	0.15	0.45
Layer 4 - 300	4.60	AU28	0.15	0.45
Layer 3 - 300	4.30	AU28	0.15	0.45
Layer 2 - 300	4.00	5E1-SP1	0.4	1.2
Layer 1 - 300	3.70	AS30	2.1	6.3
Clay Level	3.40	Total Heave		26.85

Phase 5e1 - Material Tracking

07/07/2022 (2) - AS30, AT30				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	7.00	SPLJ	0.9	2.7
Layer 9 - 300	6.70	P16	4.5	13.5
Layer 8 - 300	6.40	W213	0.8	2.4
Layer 7 - 300	6.10	AV29	0	0
Layer 6 - 300	5.80	R162	0.2	0.6
Layer 5 - 300	5.50	3CP2	0.6	1.8
Layer 4 - 300	5.20	W131	0.8	2.4
Layer 3 - 300	4.90	AT33	0.1	0.3
Layer 2 - 300	4.60	AS33	0	0
Layer 1 - 300	4.30	3CP2	0.6	1.8
Clay Level	4.00	Total Heave		25.5

12/07/2022 - AP27, AQ27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	6.70	R-CSP	0.75	2.25
Layer 11 - 300	6.40	AQ27	0	0
Layer 10 - 300	6.10	AS28	0	0
Layer 9 - 300	5.80	W131	0.8	2.4
Layer 8 - 300	5.50	AU31	0.3	0.9
Layer 7 - 300	5.20	AR28/AR29	1	3
Layer 6 - 300	4.90	R162	0.2	0.6
Layer 5 - 300	4.60	AQ27	0	0
Layer 4 - 300	4.30	AS28/AT28	0	0
Layer 3 - 300	4.00	W209-1	0.9	2.7
Layer 2 - 300	3.70	W131	0.8	2.4
Layer 1 - 300	3.40	W209-1	0.9	2.7
Clay Level	3.10	Total Heave		16.95

18/07/2022 - AR31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	7.00	R-CSP	0.75	2.25
Layer 12 - 300	6.70	AS35	0	0
Layer 11 - 300	6.40	AV30	0	0
Layer 10 - 300	6.10	3C/AU30/AV30	0.3	0.9
Layer 9 - 300	5.80	AT34	0.1	0.3
Layer 7 - 300	5.50	AS34	0	0
Layer 6 - 300	5.20	AS33	0	0
Layer 5 - 300	4.90	AT35	0.1	0.3
Layer 4 - 300	4.60	AS35	0	0
Layer 3 - 300	4.30	3CP2	0.6	1.8
Layer 2 - 300	4.00	AS35	0	0
Layer 1 - 300	3.70	AT32	0.9	2.7
Clay Level	3.40	Total Heave		8.25

19/07/22 - AJ23				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 11 - 300	6.30	AS28	0	0
Layer 10 - 300	6.00	AQ27	0	0
Layer 9 - 300	5.70	R-CSP	0.75	2.25
Layer 8 - 300	5.40	AP27	0	0
Layer 7 - 300	5.10	3CP2	0.6	1.8
Layer 6 - 300	4.80	AP27	0	0
Layer 5 - 300	4.50	AP22	0	0
Layer 4 - 300	4.20	R146	1	3
Layer 3 - 300	3.90	AH30	0.8	2.4
Layer 2 - 300	3.60	AH29	0.8	2.4
Layer 1 - 400	3.30	W204	0.8	2.4
Clay Level	2.90	Total Heave		14.25

19/07/22 - AJ21, AJ22				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 11 - 300	6.30	AS28	0	0
Layer 10 - 300	6.00	AQ27	0	0
Layer 9 - 300	5.70	R-CSP	0.75	2.25
Layer 8 - 300	5.40	AP27	0	0
Layer 7 - 300	5.10	3CP2	0.6	1.8
Layer 6 - 300	4.80	AP27	0	0
Layer 5 - 300	4.50	AP22	0	0
Layer 4 - 300	4.20	AL30	1	3
Layer 3 - 300	3.90	AK31	4.7	14.1
Layer 2 - 300	3.60	AL31	0.2	0.6
Layer 1 - 400	3.30	AJ30	0.26	0.78
Clay Level	2.90	Total Heave		22.53

22/07/22 (2) - AS30, AT30				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 10 - 300	7.00	AT31	0.3	0.9
Layer 9 - 300	6.70	AR29	0.1	0.3
Layer 8 - 300	6.40	AS35	0	0
Layer 7 - 300	6.10	AT32	0.9	2.7
Layer 6 - 300	5.80	3CP2	0.6	1.8
Layer 5 - 300	5.50	AT32	0.9	2.7
Layer 4 - 300	5.20	AS35	0	0
Layer 3 - 300	4.90	AV32	0.2	0.6
Layer 2 - 300	4.60	AT33	0.1	0.3
Layer 1 - 300	4.30	AS33	0	0
Clay Level	4.00	Total Heave		9.3

26/07/22 (2) - AJ26, AK26, AL26, AM26, AN26, AO26, AP26				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	6.70	AT31	0.3	0.9
Layer 11 - 300	6.40	AR29	0.1	0.3
Layer 10 - 300	6.10	AJ27	1.5	4.5
Layer 9 - 300	5.80	3CP2	0.6	1.8
Layer 8 - 300	5.50	AT34	0.1	0.3
Layer 7 - 300	5.20	AS34	0	0
Layer 6 - 300	4.90	3CP2	0.6	1.8
Layer 5 - 300	4.60	AT34	0.1	0.3
Layer 4 - 300	4.30	AS34	0	0
Layer 3 - 300	4.00	AS35	0	0
Layer 2 - 300	3.70	AT32	0.9	2.7
Layer 1 - 300	3.40	AS35	0	0
Clay Level	3.10	Total Heave		12.6

29/07/2022 (3) - AJ27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 8 - 300	6.30	AT29	2.1	6.3
Layer 7 - 300	6.00	AU28	0.15	0.45
Layer 6 - 300	5.70	AU29	0.15	0.45
Layer 5 - 300	5.40	AU29	0.15	0.45
Layer 4 - 300	5.10	AT26	2.1	6.3
Layer 3 - 300	4.80	W213	0.8	2.4
Layer 2 - 300	4.50	AT26	2.1	6.3
Layer 1 - 300	4.20	S19	0.6	1.8
Clay Level	3.90	Total Heave		24.45

26/07/2022 -AS31, AT31				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 12 - 300	7.00	AT31	0.3	0.9
Layer 11 - 300	6.70	AR29	0.1	0.3
Layer 10 - 300	6.40	3CP2	0.6	1.8
Layer 9 - 300	6.10	AU30	0.3	0.9
Layer 8 - 300	5.80	AU30/31	0.3	0.9
Layer 7 - 300	5.50	3CP2	0.6	1.8
Layer 6 - 300	5.20	AU30	0.3	0.9
Layer 5 - 300	4.90	AU30/AV30	0.3	0.9
Layer 4 - 300	4.60	AU33/34	0	0
Layer 3 - 300	4.30	R148	0.3	0.9
Layer 2 - 300	4.00	R164	1.4	4.2
Layer 1 - 300	3.70	AT32	0.9	2.7
Clay Level	3.40	Total Heave		16.2

10/08/2022 - AS27, AR27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 14 - 300	7.10	R-CSP	0.75	2.25
Layer 13 - 300	6.80	AL33	4.7	14.1
Layer 12 - 300	6.50	AU29	0.15	0.45
Layer 11 - 300	6.20	AV31	0.2	0.6
Layer 10 - 300	5.90	AU31	0.3	0.9
Layer 9 - 300	5.60	AT29	0.15	0.45
Layer 8 - 300	5.30	AT35	0.1	0.3
Layer 7 - 300	5.00	AW37	0.2	0.6
Layer 6 - 300	4.70	AV37	0.2	0.6
Layer 5 - 300	4.40	AT28/29	2.1	6.3
Layer 4 - 300	4.10	AT35	0.1	0.3
Layer 3 - 300	3.80	W213	0.8	2.4
Layer 2 - 300	3.50	AT27	0	0
Layer 1 - 300	3.20	R19	0.5	1.5
Clay Level	2.90	Total Heave		30.75

04/08/2022 - AR26, AR27				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 14 - 300	7.10	R-CSP	0.75	2.25
Layer 13 - 300	6.80	AV31	0.2	0.6
Layer 12 - 300	6.50	AT27	0	0
Layer 11 - 300	6.20	AT35	0.1	0.3
Layer 10 - 300	5.90	W213	0.8	2.4
Layer 9 - 300	5.60	AR26	0.1	0.3
Layer 8 - 300	5.30	AV37	0.2	0.6
Layer 7 - 300	5.00	AV28	0	0
Layer 6 - 300	4.70	AU29	0.15	0.45
Layer 5 - 300	4.40	AU28	0.15	0.45
Layer 4 - 300	4.10	AT26	2.1	6.3
Layer 3 - 300	3.80	AT27	0	0
Layer 2 - 300	3.50	W213	0.8	2.4
Layer 1 - 300	3.20	T19	0.7	2.1
Clay Level	2.90	Total Heave		18.15

18/08/2022 - AR25, AR26, AS25, AS26, AT25, AT26				
Layer Thickness (mm)	Level (mAOD)	Source	Expansion (%)	Heave (mm)
Layer 13 - 300	6.80	R-CSP	0.75	2.25
Layer 12 - 300	6.50	AU32	0.6	1.8
Layer 11 - 300	6.20	AV29	0	0
Layer 10 - 300	5.90	AU29	0.15	0.45
Layer 9 - 300	5.60	AV31	0.2	0.6
Layer 8 - 300	5.30	AU31	0.3	0.9
Layer 7 - 300	5.00	AT29	2.1	6.3
Layer 6 - 300	4.70	AS29	2.1	6.3
Layer 5 - 300	4.40	AS28	0	0
Layer 4 - 300	4.10	AT28/29	2.1	6.3
Layer 3 - 300	3.80	AR26	0.1	0.3
Layer 2 - 300	3.50	AS28	0	0
Layer 1 - 300	3.20	AT26	2.1	6.3
Clay Level	2.90	Total Heave		31.5

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Soil ID	Compaction				General	Particle Distribution							BRE				
						Fines											
	Optimum Moisture Content (%)	Max Dry Density (Mg/m3)	Natural Moisture Content (%)	Assumed/ Measured Particle Density (Mg/m3)	Water Content (%)	Clay % (<0.004mm)	Silt % (0.004 - 0.062mm)	% Fines (<0.062)	Sand % (0.062 - 2mm)	Gravel % (2-63mm)	Cobbles % (64-124mm)	Total	Initial Moisture Content %	Density on a saturated and surface-dried	Particle density on an oven-dried basis (Mg/m3)	Apparent Particle Density	Total Expansion (%)
AH29-1 (1.6)	8.9	2.34		3.1	10.6			7.5	18.5	74	0	100		2.8	2.71	3.1	0.80
AH30-1 (0.2)	13	1.95		2.75	20.7			46	23	31	0	100		2.61	2.55	2.71	
AH31 (0.5m)	10	2.00		2.7	14.6			13.9	6.1	80	0	100		2.51	2.41	2.67	0.00
AI30-1 (1.8)	12	1.97		2.7	13.4			16.3	15.7	61	7	100		2.47	2.39	2.62	0.60
AI31-1 (1.5)	12	1.97		2.9	15.5			6.7	17.3	76	0	100		2.6	2.48	2.82	
AJ21-1 (0.3)	11	2.03		2.8	11.1			5.3	32.7	59	3	100		2.4	2.32	2.53	0.24
AJ27-1 (0.7)	14	2.12		3.2	13.1			5	26	69	0	100		2.77	2.67	2.99	1.50
AJ29-1 (1.5)	11	2.14		2.9	13.6			3.4	14.6	69	13	100		2.43	2.34	2.59	
AJ30-1 (1.5)	12	1.97		2.7	14.6			10.6	18.4	68	3	100		2.44	2.34	2.59	0.26
AK21-1 (1.2)	10	2.12		2.9	12.9			11.1	24.9	64	0	100		2.41	2.33	2.53	
AK22-1 (0.5)	15	1.99		3	15.9			18.4	40.6	41	0	100		2.41	2.29	2.59	
AK27-1 (0.8)	13	2.15		3.2	13.5			3.7	26.3	70	0	100		2.89	2.79	3.1	
AK28-1 (1.0)	8.7	2.46		3.3	5.7			0.6	6.4	90	3	100		3.29	3.23	3.43	11.70
AK30-1 (0.2)	8.8	2.11		2.75	13.2			30.2	24.8	45	0	100		2.64	2.58	2.74	
AK31-1 (1.1)	13	1.50		2	24.9			10.5	45.5	44	0	100		2.38	2.31	2.51	
AK32-1 (1.0)	14	1.80		2.6	16.9			7.5	22.5	70	0	100		2.34	2.24	2.5	
AK34-1 (1.6)	9.3	2.18		2.9	9.4			5.2	12.8	80	2	100		2.7	2.61	2.85	0.30
AL21-1 (0.5)	12	1.58		2.8	18.1			12	20	63	5	100		2.48	2.37	2.63	3.60
AL24-1 (1.3)	12	1.99		2.75	12.7			2.5	21.5	70	6	100		2.25	2.13		
AL28-1 (1.2)	12	2.41		3.65	10.3			1.4	20.6	73	5	100		3.16	3.09	3.32	
AL29-1 (0.8)	10	2.32		3.2	10.7			1.9	21.1	74	3	100		3.06	2.98	3.24	6.60
AL30-1 (1.0)	12	2.01		2.75	11.1			1.1	11.9	87	0	100		2.61	2.53	2.76	5.60
AL31-1 (1.5)	?	?		2.1	23			8.4	31.6	60	0	100		1.41	1.3	1.46	
AL32-1 (0.5)	9.9	2.28		3.1	11.2			4.7	21.3	74	0	100		2.82	2.75	2.95	4.70
AL33-1 (0.8)	11	2.27		3.2	8.4			4.2	14.8	81	0	100		2.68	2.61	2.81	
AM28 1m	14	2.25		3.45	10.1			0.4	12.6	87	0	100		2.97	2.89	3.15	
AM29-1	15	1.92		2.8	15			3.3	17.7	74	5	100		2.52	2.34	2.22	1.00
AM30-1	9.1	2.11		2.7	6.5			0.2	9.8	90	0	100		3.21	3.14	3.36	5.60
AM31-1	12	2.10		2.85	9.7			3	17	80	0	100		3.06	2.96	2.28	
AN21																	
AN22																	
AN23-1 (1.5)	8.9	2.17		2.9	10.9			2.3	18.7	79	0	100		2.93	2.8		7.00
AN29-1 0.85m	13.9	1.95		2.8	11.8			1.8	8.2	80	10	100		2.21	2.08	2.4	0.50
AN30-1	9.3	2.33		3.15	13			12.4	24.6	63	0	100		2.38	2.24	2.14	0.10
AN31-1	6.6	2.24		2.7	7			3.9	9.1	87	0	100		3.12	3.04	3.3	1.70
AO21-1	14	1.96		2.9	12.4			4.3	22.7	61	12	100		2.38	2.26	2.56	0.10
AO25-1 1m					7			1.3	10.7	82	6	100					
AO26-1 1.8m					11.8			3.4	16.6	75	5	100					1.40
AO27-1 (1.2)	6.6	2.68		3.5	7.3			1.1	14.9	84	0	100		3.3	3.17	3.64	
AO28																	
AO29-1 (1.5)	13	2.27		3.3	13.1			1.4	18.6	80	0	100		2.98	2.91	3.14	11.00
AO30	9.6	2.20		2.9	11			1.8	13.2	85	0	100		3.22	3.16	3.38	8.50
AP21-1	7.8	2.95		4	11.9			22.9	37.1	40	0	100		3.06	2.93	3.36	
AP22-1 1m	13	1.93		2.7	12.9			4.5	12.5	76	7	100		2.53	2.22	2.53	0.00
AP23-1 1.5m	14	2.12		N/A	12.1			4.2	21.8	74	0	100					1.00
AP25-1 1.7m	14	2.12		N/A	7.5			1.6	13.4	73	12	100					1.50
AP26-1 1.7m	15	1.90		2.75	10.1			3.4	16.6	80	0	100					
AP27-1 0.5m	6.8	1.87		2.2	4.1			2.7	6.3	65	26	100		2.29	2.2	2.41	
AP30-1	16	1.89		2.8	12			2.8	19.2	78	0	100		2.48	2.37	2.66	
AP31	13	1.92		2.65	13			1.3	40.7	58	0	100		2.54	2.4	2.8	1.30
AQ21-1	9.7	2.25		3.1	17.9			11.3	28.7	55	5	100		2.77	2.65	3.02	1.10
AQ22-1 0.5m	11	2.13		2.9	12.7			12.2	18.8	58	11	100		2.51	2.42	2.65	0.00
AQ23-1 (1m)	14.00	2.11		N/A													
AQ24-1 (1.5)	7.3	2.68		3.6	7			1.3	7.7	91	0	100		2.54	3.4		
AQ25-01 (0.2m)	13	1.77		2.45	30.1			2.4	45.6	52	0	100		2.39	2.2	2.71	1.50
AQ26-1 (1.5)	13	2.44		3.8	9.8			0.1	15.9	84	0	100		3.07	2.95	3.34	
AQ27-1 0.5m	16	1.72		2.45	11.2			4.9	13.1	70	12	100		2.16	2.02	2.34	0.00
AQ28																	
AQ30-1 1.5m	11	2.21		3	6.9			7.5	18.5	74	0	100		2.94	2.84	3.13	
AQ31-1	15	1.94		2.8	8.7			0.3	9.7	90	0	100		3.19	3.1	3.38	9.50
AR21-1	13	1.99		2.75	11			7.3	24.7	68	0	100		2.42	2.3	2.63	
AR22-1 0.9m	7.5	2.26		2.8	8			11.5	22.5	54	12	100		2.64	2.55	2.8	
AR22-2 1.8m	7.2	2.21		2.7	8.3			3.7	8.3	74	14	100		2.54	2.47	2.66	0.00
AR24-1 0.3m	8.1	2.36		3.05	6.7			0.5	11.5	88	0	100		3.08	3.01	3.25	
AR24-2 1.6m	13	1.97		2.75	11.5			6.1	14.9	69	10	100		2.48	2.37	2.65	0.00
AR25-1 0.4m	4.5	2.72		3.2	5.7			1.5	7.5	75	16	100		3.58	3.46	3.94	
AR25-2 1.5m	17	1.84		2.75	14.1			4.7	10.3	83	2	100		2.24	2.11	2.41	0.00
AR26-1 0.5m	12	2.29		3.3	10.2			4.2	16.8	72	7	100		2.53	2.42	2.71	0.10
AR29-1 (1.2)	15	1.55		2.2	24.3			0.4	25.6	74	0	100		2.01	1.87		
AR30-1	16	1.92		2.8	13			3.1	26.9	70	0	100		2.91	2.67	2.55	0.00
AR31-1	9	2.29		2.9	8.3			9.7	20.3	70	0	100		2.63	2.56	2.74	0.00
AR35-1 (0.6)	14	1.86		2.65	9.4			10.9	24.1	65	0	100		2.59	2.51	2.73	
AS28-1 0.5m	14	1.86		2.6	14.7			9.2	24.8	62	4	100		2.1	1.98	2.25	
AS28-2 1.5m	12	1.97		2.7	9.7			6.3	27.7	66	0	100		2.29	2.17	2.48	0.00
AS29-1 1m	12	1.99		2.7	14.7			1.4	11.6	87	0	100		2.35	2.24	2.51	
AS29-2 2.5m	20	1.58		2.4	14.4			6	18	71	5	100		2.13	2.03	2.26	0.50
AS29-1 (1.0)	14	1.89		2.7	12.8			2.1	19.9	66	12	100		2.66	2.43	3.15	2.10
AS30-1 - 0.7m	12	2.21		3.1				2.2	13.8	84	0	100		2.95	2.82	3.25	
AS31-1	10	2.19		2.9	8.8			9.9	28.1	60	2	100		2.63	2.52	2.82	
AS34-1 (0.4)	14	2.06		N/A	8.4			5.9	15.1	79	0	100		4.17	4.12	4.35	0.00
AS35-1 (0.3)	17	1.89		N/A													
AT26-1	8.7	2.23		2.75	8.9			1.1	8.9	85	5	100		3.11	3.01	3.34	9.80
AT29-1 (1.1)	18	1.53		2.3	22.3			11.5	32.5	52	4	100		1.9	1.79	2	
AT30-1 - 1.5m	7.5	2.33		2.85	12			10.8	33.2	56	0	100		2.85	2.74	3.07	
AT31-1	15	1.84		2.65	9.9			5.7	16.3	78	0	100		2.76	2.67	2.93	
AT34-2 (1.5)					5.7			5.7	14.3	60	20	100		2.48	2.36	2.67	0.10
AT35-1 (0.5)	24	1.67		N/A	11.7			9.8	20.2	70	0	100		2.6	2.46	2.84	
AU26																	
AU27																	
AU28																	
AU29-1 (0.5)	9.9	1.97		2.6	13.4			6.2	37.8	53	3	100		2.14	2.06	2.25	0.15
AU30-1	19	1.49		2.15	19			10.2	27.8	62	0	100		1.82	1.72	1.91	0.30
AU31-1	11	1.89		2.45	11			7.3	19.7	73	0	100		2.25	2.16	2.36	
AU34-1 (0.5)	13	2.03		N/A	7.9			17.1	27.9	55	0	100					0.00
AU36-2 (1.3)	17	1.80		N/A	9.9			10.2	15.8	70	4	100		2.59	2.45	2.84	1.40
AV35-2 (2)					12.4			6.6	12.4	63	18	100		2.37	2.23	2.58	
AV36-2 (1.3)								13.1	21.9	65	0	100		2.84	2.77	2.98	0.20

P18-669 , 5e1 Geotechnical Testing Summary

Soil ID	Compaction				General	Particle Distribution							BRE				
						Fines											
	Optimum Moisture Content (%)	Max Dry Density (Mg/m3)	Natural Moisture Content (%)	Assumed/ Measured Particle Density (Mg/m3)	Water Content (%)	Clay % (<0.004mm)	Silt % (0.004 - 0.062mm)	% Fines (<0.062)	Sand % (0.062 - 2mm)	Gravel % (2-63mm)	Cobbles % (64-124mm)	Total	Initial Moisture Content %	Density on a saturated and surface-dried	Particle density on an oven-dried basis (Mg/m3)	Apparent Particle Density	Total Expansion (%)
AV37-1 (0.5)					9.6			4.6	9.4	65	21	100		2.61	2.5	2.8	
AW37-2 (1.5)					40.9			66.8	21.2	12	0	100					
R146-1	12	1.98		2.72	9.7			12.9	29.1	58	0	100		2.56	2.48	2.7	1.00
R147-1	6.8	2.15		2.7	7.5			16	24	60	0	100		2.31	2.21	2.46	0.00
R148-1	10	2.05		2.65	7.1			9.2	18.8	68	4	100		2.45	2.36	2.58	
R159-1	11	2.07		2.8	7.2			12.3	22.7	65	0	100		2.47	2.36	2.65	0.10
R160-1	10	2.09		2.8	10.8			19.2	21.8	59	0	100		2.65	2.53	2.88	0.60
R162-1	7.4	2.04		2.51	7.4			10.8	16.2	60	13	100		2.37	2.27	2.53	0.20
R-CSP-1 0.2m	11	2.06		2.8	12			12.7	27.3	60	0	100		2.66	2.54	2.87	0.75
R-CSP-5 - 0.2M	9.8	2.15		2.8	10			11.1	19.9	63	6	100		2.56	2.43	2.79	0.60
R-CSP-3	11.3	2.09		2.95	12.8			5.4	29.6	65	0	100		2.63	2.54	2.79	
R-CSP-2	11	2.48		3.65	13.9			6.7	31.3	62	0	100		2.71	2.63	2.87	0.20
W131-1	10	2.37		3.35	12.1			12.1	30.9	55	2	100		2.7	2.81	3.04	
W131-2	9	2.18		2.9	16.8			14.5	29.5	56	0	100		2.47	2.57	2.76	
W204-10	11	2.22		3.15	14.1			9.7	19.3	57	14	100		2.67	2.79	3.04	
W204-3	16	1.94		3.15	23.4			27.9	13.1	59	0	100		2.66	2.77	3	
W204-1	19	1.85		3.1	30.9			40.5	15.5	44	0	100		2.7	2.82	3.05	
W204-2	12	1.90		2.6	18.5			10.7	25.3	64	0	100		2.67	2.77	2.98	
W204-4	16	2.11		3.45	21.3			12.6	24.4	63	0	100					
W204-5	13	2.02		2.9	17.8			12	23	65	0	100		2.42	2.52	2.7	
W204-6					17.8			10.7	22.3	67	0	100		2.48	2.6	2.8	
W204-7	11	1.76		2.3	14.8			8.7	27.3	64	0	100		2.41	2.51	2.66	
W204-8	19	1.82		2.9	15.8			9.5	22.5	64	4	100		2.71	2.8	2.99	
W204-9	9.4	1.86		2.45	21.1			24.7	18.3	57	0	100		2.41	2.5	2.65	
W206-1	13	1.99		2.85	17.7			23.2	20.8	56	0	100		2.35	2.47	2.66	
W206-2	10	1.83		2.3	18.4			13.7	30.3	56	0	100		2.22	2.32	2.45	
W-208-1	15	1.97		2.9	15.8			8.9	28.1	51	12	100		2.39	2.49	2.66	
W-209-1	14	2.10		3.15	14.4			7.6	27.4	65	0	100		2.5	2.6	2.8	0.75
W208-4-1	13	2.24		3.35	12.4			10.9	22.1	67	0	100		2.5	2.61	2.8	
W-208-4-2	11	2.30		3.25	13.4			8.3	25.7	66	0	100		2.65	2.77	2.99	
W-209-B-1	11	1.76		2.35	22			13.3	35.7	51	0	100		2.19	2.32	2.5	
W209-B-2	14	1.76		2.5	18.6			10.2	34.8	52	3	100		2.34	2.45	2.63	
W-209-C-1	14	2.18		3.35	12.3			5.9	19.1	75	0	100		2.4	2.51	2.7	
W-209-C-2	12	2.15		3.05								0		2.4	2.49	2.64	
3CP1-1	17	2.26		3.7	9.7			3.9	17.1	79	0	100		3.09	2.99	3.29	4.60
3CP1-2	7.3	2.24		2.75	10			2.7	15.3	75	7	100		2.99	2.89	3.23	
3CP1-3	11	2.30		3.15	12			13.2	21.8	65	0	100		2.9	2.81	3.09	
3CP1-4	11	2.15		2.85	11			0.4	18.6	81	0	100		2.94	2.94	3.18	0.90
3CP1-5	15	2.13		3.2	8			2.3	9.7	83	5	100		3.12	3.01	3.38	4.20
3CP1-6	18	1.77		2.65	16			10.3	20.7	69	0	100		1.95	1.8	2.12	
3CP1-7	12	2.33		3.25	12			11.3	25.7	58	5	100		2.6	2.51	2.77	0.50
3CP1-8	7.4	2.64		3.6	11			15.5	30.5	54	0	100		3	2.91	3.2	
3CP1-9					12			17.2	34.8	48	0	100		2.76	2.69	2.91	
3CP1-10	15	2.23		3.5	11			4	19	77	0	100		3.17	3.08	3.4	0.10
3CP1-11	9.9	2.27		3.05	12.2			5.6	17.4	77	0	100		2.88	2.79	3.07	0.50
3CP1-17	14	2.04		3	11.9			4	22	74	0	100		2.68	2.56	2.9	4.90
3CP1-18	16	1.93		2.9	13.5			17.1	28.9	54	0	100		2.5	2.4	2.67	
3CP1-20	11.6	2.36		3.4	11.7			13.4	32.6	54	0	100		2.71	2.61	2.89	
3CP1-21	10	2.04		2.7	11.6			1.7	16.3	82	0	100		2.8	2.68	3.07	4.70
3CP1-24	15	1.94		2.9	11.7			13.1	25.9	56	5	100		2.57	2.47	2.76	
3CP1-28	6.8	2.47		3.1	10.7			0.6	14.4	71	14	100		3.12	3.02	3.34	
3CP1-30	9.6	2.09		2.7	10.5			1.3	22.7	76	0	100		2.86	2.75	3.06	
3CP1-34					11.2			1.2	14.8	61	23	100		2.38	2.27	2.56	
3CP1-12	12	2.21		3.15	16.9			1.6	21.4	63	14	100		2.97	2.85	3.24	
3CP1-13	9.2	2.19		2.9	9.4			0.9	19.1	78	2	100		3.14	3.07	3.29	8.10
3CP1-14	13	2.08		3	12.3			2.5	21.5	76	0	100		3	2.9	3.23	
3CP1-15	14	2.07		3.1	14.2			0.6	19.4	80	0	100		2.75	2.62	2.99	4.10
3CP1-16	15	2.19		3.4	11.8			2.6	18.4	79	0	100		2.84	2.73	3.07	
3CP1-19	13	2.06		2.9	10.9			4.6	14.4	48	33	100		2.64	2.53	2.83	0.00
3CP1-22	9.6	2.33		3.12	10.7			8.3	18.7	67	6	100		2.88	2.79	3.07	
3CP1-23	7.3	2.34		2.95	10.2			11.1	31.9	57	0	100		2.8	2.71	2.99	0.30
3CP1-25	14	2.17		3.2	8.2			4.2	12.8	83	0	100		2.78	2.66	3.03	5.20
3CP1-26	12	2.20		3.1	11.9			1.9	19.1	79	0	100		3.12	3.01	3.37	
3CP1-27	11	2.15		2.9	9.7			0.7	14.3	85	0	100		3.13	3.06	3.28	6.90
3CP1-29	6.7	2.48		3.05	10.7			0.9	15.1	84	0	100		3.11	3	3.37	5.50
3CP1-31	9.9	2.28		3.05	11.8			3	16	81	0	100		2.93	2.84	3.11	6.20
3CP1-32	11	2.13		2.8	11.4			2.8	17.2	70	10	100		3.07	2.98	3.27	
3CP1-33	12	2.28		3.3	9.2			3.7	12.3	84	0	100		3.04	2.95	3.23	3.70
3CP1-35	15	1.70		2.35	22			9.8	24.2	66	0	100		2.18	2.05	2.37	0.20
3CP1-36	12	2.09		2.9	13.5			1.9	17.1	67	14	100		2.43	2.31	2.61	
3CP1-37	12	1.78		2.35	12.1			6.7	28.3	65	0	100		2.11	1.96	2.3	0.40
AM32-1	18	1.72		2.65				17.2	27.8	55	0	100		2.39	2.29	2.54	0.20
AN33-1								7.5	17.5	42	33	100		2.87	2.8	3	0.00
AN32-1								4.8	16.2	79	0	100		2.62	2.53	2.79	
AP27-1 0.5m	6.8	1.87		2.2	4.1			2.7	6.3	65	26	100		2.29	2.2	2.41	
AS33-1 (1.2)								1.8	18.2	77	3	100		2.56	2.43	2.77	0.00
AT32-1	19	1.75		2.65													
AT33-2 (2.2)								9.9	20.1	60	10	100		2.5	2.38	2.69	
AU32-1	12	2.16		N/A													
AV29-01 (1.0m)	14	1.86		2.65	15.3			5.9	16.1	78	0	100		2.38	2.26		0.00
AV30-1	14	2.09		N/A													
AV31-1 (0.8)								9.6	29.4	61	0	100		1.98	1.87	2.1	
AV32-1 (0.8)								5	27	68	0	100		2.66	2.52	2.91	0.20
R-164-2								39.7	17.3	43	0	100		2.77	2.71	2.89	
R-164-1								6.3	22.7	71	0	100		2.89	2.8	3.09	1.40
R-164-4	20	1.79		N/A				11.6	24.4	64	0	100		2.77	2.69	2.93	
R-164-3								8.6	25.4	62	4	100		2.7	2.62	2.84	0.20
W213-1 (0.2)	10	1.97		2.6	23.8			29.3	27.7	43	0	100		2.46	2.54		0.80
W213-2 (0.2)	16	1.83		2.77	24.2			26	25	34	15	100		2.49	2.58		
W212-3 (0.2)	15	1.92		2.9	22.1			23	27	50	0	100		2.54	2.61		0.80
W213-4	9.1	1.89		2.6	14.6			6.8	21.2	72	0	100		2.63	2.73		
S19-1	13	1.65		2.25	14.9			6.8	22.2	71	0	100		2.39	2.27	2.58	0.60
T19-1 (0.3)	11	2.06		2.8	13.2			8.2	30.8	56	5	100		2.7	2.6		0.70
R19-1 2.5m	12	1.97		2.75	12.5			9	17	71	3	100		2.53	2.45	2.68	0.50
P16-1 (1.3)	9.1	2.14		2.8	9.8			2.1	19.9	78	0	100		2.95	2.88	3.1	4.50
5E1-SP1-1	7.7	2.89		3.9	5.8			4.8	29.2	66	0	100		3.5	3.4	3.8	
5E1-SP1-2	14	1.95		2.75	11.2			5.8	16.2	62	16	100		2.4	2.29	2.57	

P18-669 , 5e1 Geotechnical Testing Summary

Soil ID	Compaction				General	Particle Distribution							BRE				
	Optimum Moisture Content (%)	Max Dry Density (Mg/m3)	Natural Moisture Content (%)	Assumed/ Measured Particle Density (Mg/m3)	Water Content (%)	Fines		% Fines (<0.062)	Sand % (0.062 - 2mm)	Gravel % (2-63mm)	Cobbles % (64-124mm)	Total	Initial Moisture Content %	Density on a saturated and surface-dried	Particle density on an oven-dried basis (Mg/m3)	Apparent Particle Density	Total Expansion (%)
						Clay % (<0.004m m)	Silt % (0.004 - 0.062mm)										
5E1-SP1-3	19	1.75		2.8	10.6			8.4	14.6	63	14	100		2.41	2.3	2.58	
5E1-SP1-4	13	1.82		2.53	11.5			8.5	17.5	62	12	100		2.5	2.4	2.69	
5E1-SP1-5	16	2.00		N/A	11.5			8.5	25.5	66	0	100		2.6	2.51	2.76	0.20
5E1-SP1-6	16	2.22		N/A	14.4			8.6	23.4	68	0	100		2.38	2.27	2.55	
5E1-SP1-7	18	2.07		N/A	12.9			5.5	18.5	71	5	100					0.40
5E1-SP1-8	26	1.80		N/A	16.9			2.9	18.1	79	0	100		2.43	2.35	2.57	
5E1-SP2-1	9.3	2.36		3.2	4.2			5.6	17.4	57	20	100		2.51	2.41	2.67	
5E1-SP2-2	9.4	2.32		3.1	5.7			3.1	14.9	57	25	100		2.5	2.38	2.7	0.10
3CP2-4	17	1.82		2.65	12.2			12.9	26.1	46	15	100		2.59	2.51	2.74	
3CP2-6	16	1.82		2.65	10.2			18.7	28.3	47	6	100		2.62	2.55	2.75	
3CP2-3	17	1.91		N/A				12.2	18.8	56	13	100		2.61	2.5	2.8	0.60
3CP2-1				N/A				13.1	25.9	61	0	100		2.44	2.35	2.59	
3CP2-7					13.5			19.1	23.9	57	0	100		2.63	2.51	2.84	
3CP2-5					12.7			24.5	22.5	42	11	100		2.68	2.6	2.84	
AR28-1 1m	12	2.09		2.9	11.5			2.1	21.9	76	0	100		2.88	2.75	3.15	
AR28-2 1.8m	14	1.92		2.7	11.8			6.1	29.9	64	0	100		2.35	2.24	2.53	1.00
Number of Tests:	180	180	0	165	182	0	0	197	197	197	197	198	0	189	189	179	94
Max	26.00	2.95	0.00	4.00	40.90	0.00	0.00	66.80	45.60	91.00	33.00	100.00	0.00	4.17	4.12	4.35	11.70
Min	4.50	1.49	0.00	2.00	4.10	0.00	0.00	0.10	6.10	12.00	0.00	0.00	0.00	1.41	1.30	1.46	0.00
Av	12.40	2.07	#DIV/0!	2.89	12.76	#DIV/0!	#DIV/0!	8.56	20.95	66.67	3.82	99.49	#DIV/0!	2.64	2.56	2.83	1.92

Appendix D: Chemical Laboratory Results

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

Final Report

Report No.:	22-04545-1
Initial Date of Issue:	15-Feb-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	47
Turnaround (Wkdays):	7
Date Approved:	15-Feb-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	08-Feb-2022
Date Instructed:	08-Feb-2022
Results Due:	16-Feb-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444
		Client Sample ID.:			3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	5.1	3.2	5.0	4.5	3.4	4.3	5.7	5.7	5.7
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	10.8	10.7	11.6	11.1	11.7	11.3	10.9	11.1
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	0.90	1.5	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.71	0.72	1.0	0.78	1.2	0.65	1.9	1.3	2.3
Iron (Total)	N	2430	mg/kg	100	240000	210000	220000	200000	210000	210000	190000	140000	150000
Arsenic	M	2450	mg/kg	1.0	19	17	19	18	18	19	21	16	19
Cadmium	M	2450	mg/kg	0.10	0.45	0.35	0.50	0.42	0.36	1.2	0.66	0.31	0.43
Chromium	M	2450	mg/kg	1.0	280	300	300	420	300	410	450	280	330
Manganese	M	2450	mg/kg	5.0	19000	19000	19000	31000	18000	29000	31000	20000	25000
Copper	M	2450	mg/kg	0.50	43	29	32	35	25	35	39	30	27
Mercury	M	2450	mg/kg	0.10	0.42	0.38	0.52	0.51	0.48	0.52	0.95	0.50	0.64
Nickel	M	2450	mg/kg	0.50	41	31	39	49	33	49	48	40	40
Lead	M	2450	mg/kg	0.50	66	58	75	87	59	110	110	61	84
Selenium	M	2450	mg/kg	0.20	0.22	< 0.20	< 0.20	0.31	< 0.20	< 0.20	< 0.20	0.36	0.22
Vanadium	U	2450	mg/kg	5.0	350	410	360	1700	360	1600	1700	1000	1300
Zinc	M	2450	mg/kg	0.50	110	97	110	110	100	110	120	99	110
Organic Matter	M	2625	%	0.40	5.0	1.0	2.8	3.5	4.7	2.1	6.6	6.9	5.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.5	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	29	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	5.9	20	< 1.0	16	< 1.0	43	51	41	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	230	200	90	290	< 1.0	250	250	280	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	240	220	90	310	< 5.0	300	340	320	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367436	1367437	1367438	1367439	1367440	1367441	1367442	1367443	1367444
					Client Sample ID.:	3CP21	3CP22	3CP23	3CP24	3CP25	3CP26	3CP27	3CP28	3CP29
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		17	11	4.6	11	< 1.0	25	13	4.9	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		62	84	51	110	< 1.0	130	89	110	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		80	95	56	120	< 5.0	160	100	120	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		320	320	150	430	< 10	460	440	430	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	2.1	0.59	< 0.10	0.58	0.80	0.79	0.87
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	1.6	0.20	< 0.10	0.14	0.18	0.11	0.14
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.20	0.12	< 0.10	0.17	0.18	0.19	0.18
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.9	0.17	< 0.10	0.20	0.16	0.10	0.21
Phenanthrene	M	2800	mg/kg	0.10		2.5	1.7	27	4.0	2.3	4.7	2.1	1.4	1.7
Anthracene	M	2800	mg/kg	0.10		0.53	0.36	4.7	0.53	0.56	0.57	0.47	0.26	0.27
Fluoranthene	M	2800	mg/kg	0.10		3.5	2.4	34	5.4	2.8	5.3	5.0	2.4	2.8
Pyrene	M	2800	mg/kg	0.10		2.5	1.8	23	3.5	2.0	3.8	4.1	1.9	2.3
Benzo[a]anthracene	M	2800	mg/kg	0.10		1.4	1.2	12	3.2	1.3	3.2	3.5	1.3	1.8
Chrysene	M	2800	mg/kg	0.10		1.5	1.1	12	3.9	1.4	3.7	3.7	1.7	2.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		2.1	1.6	15	4.9	1.9	4.9	5.1	2.3	3.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.74	0.53	4.6	1.6	0.60	1.8	1.9	0.85	1.3
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.5	0.97	13	2.7	1.2	3.3	3.7	1.4	2.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		1.3	0.99	9.9	2.6	1.1	3.2	3.3	1.5	2.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.27	0.16	1.4	0.59	0.16	0.54	0.61	0.23	0.41
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		1.1	0.83	7.9	2.1	0.85	2.2	2.8	1.2	1.7
Total Of 16 PAH's	N	2800	mg/kg	2.0		19	14	170	36	16	38	38	18	23
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453
		Client Sample ID.:			3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:				NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-		-		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	6.1	6.7	5.4	5.3	5.6	6.1	5.1	5.0	6.0
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	11.2	10.2	10.5	9.3	10.3	10.5	9.9	11.0	10.1
Cyanide (Total)	M	2300	mg/kg	0.50	1.0	3.0	< 0.50	0.60	0.80	< 0.50	< 0.50	1.1	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.73	4.0	1.3	1.2	1.4	2.2	2.6	0.86	0.76
Iron (Total)	N	2430	mg/kg	100	180000	120000	51000	270000	230000	28000	31000	27000	32000
Arsenic	M	2450	mg/kg	1.0	18	18	22	17	20	19	12	9.9	17
Cadmium	M	2450	mg/kg	0.10	0.53	1.7	1.7	0.75	0.94	0.79	0.42	0.31	0.75
Chromium	M	2450	mg/kg	1.0	400	120	180	38	110	110	77	240	80
Manganese	M	2450	mg/kg	5.0	28000	5700	12000	6300	6800	6300	3300	17000	5800
Copper	M	2450	mg/kg	0.50	32	38	35	24	35	25	19	150	24
Mercury	M	2450	mg/kg	0.10	0.76	2.0	0.64	0.40	0.42	0.33	0.20	0.49	0.52
Nickel	M	2450	mg/kg	0.50	44	38	36	40	39	34	27	33	30
Lead	M	2450	mg/kg	0.50	97	280	290	110	150	99	73	81	150
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.39	< 0.20	0.22	0.37	0.69	0.36	0.58
Vanadium	U	2450	mg/kg	5.0	1500	170	250	60	130	140	100	890	120
Zinc	M	2450	mg/kg	0.50	110	530	560	190	380	150	140	94	200
Organic Matter	M	2625	%	0.40	3.3	12	7.9	9.5	8.5	6.9	6.2	13	1.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	440	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	440	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	26	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	13	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367445	1367446	1367447	1367448	1367449	1367450	1367451	1367452	1367453
					Client Sample ID.:	3CP30	3CP31	3CP32	3CP33	3CP34	3CP35	3CP36	3CP37	3CP38
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	6.7	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	250	< 1.0	< 1.0	< 1.0	< 1.0	130	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	430	< 5.0	< 5.0	< 5.0	< 5.0	130	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	430	< 10	< 10	< 10	< 10	570	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		1.0	2.9	4.1	< 0.10	4.2	0.82	< 0.10	0.72	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		0.12	0.41	1.0	< 0.10	0.56	0.17	< 0.10	0.20	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		0.16	0.28	0.22	< 0.10	0.13	0.12	< 0.10	0.18	< 0.10
Fluorene	M	2800	mg/kg	0.10		0.10	0.36	0.84	< 0.10	0.33	0.27	< 0.10	0.15	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		2.0	2.1	6.0	0.56	1.8	1.4	0.91	3.6	0.46
Anthracene	M	2800	mg/kg	0.10		0.33	0.54	1.9	0.12	0.63	0.28	0.20	0.74	0.11
Fluoranthene	M	2800	mg/kg	0.10		3.7	3.1	9.4	0.29	3.1	1.7	1.3	6.0	0.65
Pyrene	M	2800	mg/kg	0.10		2.9	2.5	6.5	0.30	2.6	1.3	1.0	4.1	0.48
Benzo[a]anthracene	M	2800	mg/kg	0.10		2.2	2.1	4.3	0.18	2.3	0.86	0.65	4.0	0.33
Chrysene	M	2800	mg/kg	0.10		2.8	2.1	4.1	0.25	2.2	0.79	0.74	4.3	0.35
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		4.1	3.6	5.8	< 0.10	3.8	1.1	1.1	5.3	0.51
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		1.5	1.2	2.0	< 0.10	1.2	0.38	0.33	1.8	0.19
Benzo[a]pyrene	M	2800	mg/kg	0.10		2.9	2.8	4.2	< 0.10	2.8	0.84	0.80	3.4	0.37
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		2.8	2.6	3.7	< 0.10	2.3	0.71	< 0.10	3.2	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.53	0.41	0.53	< 0.10	0.42	0.13	< 0.10	0.77	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.3	2.0	2.8	< 0.10	1.8	0.64	< 0.10	2.4	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		29	29	57	< 2.0	30	12	7.0	41	3.5
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367454	1367455	1367456	1367457	1367458	1367459	1367460	1367461	1367462
		Client Sample ID.:			3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45	3CP46	3CP47
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	4.6	5.0	5.9	0.82	5.4	2.7	3.7	3.7	3.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.0	10.7	10.5	10.2	10.6	10.0	9.8	9.8
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	< 0.50	< 0.50	1.8	0.80	1.1	0.70	1.0	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.78	0.58	3.3	2.4	1.0	0.93	1.6	1.9	1.8
Iron (Total)	N	2430	mg/kg	100	33000	33000	30000	32000	32000	32000	34000	34000	30000
Arsenic	M	2450	mg/kg	1.0	17	25	24	14	13	12	18	16	17
Cadmium	M	2450	mg/kg	0.10	0.71	0.82	0.94	0.42	0.36	0.38	0.74	0.61	0.55
Chromium	M	2450	mg/kg	1.0	70	80	310	130	80	88	98	100	100
Manganese	M	2450	mg/kg	5.0	4400	6400	18000	10000	6800	6700	7400	5200	6500
Copper	M	2450	mg/kg	0.50	20	31	34	22	35	24	27	28	25
Mercury	M	2450	mg/kg	0.10	0.43	0.70	0.63	0.25	0.16	0.18	0.24	0.25	0.26
Nickel	M	2450	mg/kg	0.50	26	29	41	38	37	31	41	38	42
Lead	M	2450	mg/kg	0.50	120	170	140	150	220	210	160	160	150
Selenium	M	2450	mg/kg	0.20	0.48	0.66	0.32	< 0.20	0.45	0.47	< 0.20	0.27	0.21
Vanadium	U	2450	mg/kg	5.0	100	130	410	480	290	330	310	250	320
Zinc	M	2450	mg/kg	0.50	180	120	200	130	130	190	190	150	140
Organic Matter	M	2625	%	0.40	12	2.8	2.8	13	64	24	16	28	7.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367454	1367455	1367456	1367457	1367458	1367459	1367460	1367461	1367462
					Client Sample ID.:	3CP39	3CP40	3CP41	3CP42	3CP43	3CP44	3CP45	3CP46	3CP47
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	16	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	41	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	57	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	< 10	< 10	< 10	57	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		1.5	< 0.10	1.9	1.2	2.1	1.6	1.2	2.1	1.4
Acenaphthylene	N	2800	mg/kg	0.10		0.20	< 0.10	0.43	0.13	0.16	0.21	0.21	0.22	0.22
Acenaphthene	M	2800	mg/kg	0.10		0.15	< 0.10	< 0.10	0.33	0.30	0.35	0.16	0.31	0.26
Fluorene	M	2800	mg/kg	0.10		0.26	< 0.10	0.20	0.18	0.24	0.26	0.21	0.31	0.27
Phenanthrene	M	2800	mg/kg	0.10		1.8	0.46	2.0	3.4	4.1	4.1	2.6	2.9	2.1
Anthracene	M	2800	mg/kg	0.10		0.32	0.12	0.50	0.41	0.59	0.88	0.59	0.59	0.43
Fluoranthene	M	2800	mg/kg	0.10		1.7	0.83	3.0	3.8	4.2	4.9	3.2	2.6	2.6
Pyrene	M	2800	mg/kg	0.10		1.3	0.74	2.2	3.0	3.1	3.7	2.4	1.9	2.2
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.90	0.78	1.3	1.6	2.0	2.3	1.3	1.0	1.3
Chrysene	M	2800	mg/kg	0.10		0.96	0.80	1.3	1.9	2.4	2.7	1.4	1.2	1.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.4	1.2	1.8	2.3	2.7	2.9	1.7	1.2	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.45	0.44	0.73	0.87	0.84	0.90	0.51	0.35	0.59
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.0	1.0	1.3	1.7	1.8	2.0	1.2	0.87	1.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.83	< 0.10	1.0	1.5	1.3	1.3	< 0.10	< 0.10	1.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.18	< 0.10	0.22	0.24	0.37	0.19	< 0.10	< 0.10	0.66
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.75	< 0.10	0.91	1.3	1.3	1.2	< 0.10	< 0.10	1.1
Total Of 16 PAH's	N	2800	mg/kg	2.0		14	6.4	19	24	28	30	17	16	19
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471
		Client Sample ID.:			3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	3.9	3.1	4.8	5.9	4.7	5.9	5.7	7.1	5.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.9	11.0	11.9	11.9	11.9	11.5	11.9	> 12.0	12.0
Cyanide (Total)	M	2300	mg/kg	0.50	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	< 0.50	1.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.73	1.1	< 0.50	< 0.50	0.70	0.54	< 0.50	< 0.50	0.54
Iron (Total)	N	2430	mg/kg	100	27000	27000	27000	27000	27000	28000	27000	27000	27000
Arsenic	M	2450	mg/kg	1.0	16	13	12	15	16	12	13	13	13
Cadmium	M	2450	mg/kg	0.10	0.52	0.43	0.83	0.82	0.52	0.52	0.69	0.48	0.47
Chromium	M	2450	mg/kg	1.0	320	290	310	300	270	210	270	250	280
Manganese	M	2450	mg/kg	5.0	22000	21000	22000	20000	17000	13000	18000	18000	22000
Copper	M	2450	mg/kg	0.50	35	30	30	31	27	21	26	26	31
Mercury	M	2450	mg/kg	0.10	0.74	0.70	1.0	1.2	0.59	0.48	0.49	0.53	0.83
Nickel	M	2450	mg/kg	0.50	45	36	31	35	38	27	36	36	37
Lead	M	2450	mg/kg	0.50	110	89	130	150	120	110	91	130	130
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.28	< 0.20	0.31	0.61	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	1200	1100	1000	1000	700	570	810	760	870
Zinc	M	2450	mg/kg	0.50	100	94	110	130	110	100	90	100	91
Organic Matter	M	2625	%	0.40	4.7	5.2	6.2	7.2	11	7.1	6.2	5.3	4.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	310	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056					Chemtest Sample ID.:	1367463	1367464	1367465	1367466	1367467	1367468	1367469	1367470	1367471
					Client Sample ID.:	3CP54	3CP55	3CP56	3CP57	3CP58	3CP59	3CP60	3CP61	3CP62
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Bottom Depth (m):	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
					Date Sampled:	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
					Asbestos Lab:	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	7.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	120	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	130	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	440	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		0.67	1.1	0.68	0.70	0.84	1.4	0.71	0.78	0.50
Acenaphthylene	N	2800	mg/kg	0.10		0.20	0.14	< 0.10	0.14	0.23	0.32	0.18	0.38	0.15
Acenaphthene	M	2800	mg/kg	0.10		0.25	0.23	0.16	0.18	0.10	0.71	0.18	0.15	0.14
Fluorene	M	2800	mg/kg	0.10		0.17	0.15	0.14	< 0.10	0.20	0.50	0.14	0.32	0.23
Phenanthrene	M	2800	mg/kg	0.10		3.5	3.2	3.3	3.4	5.4	6.2	3.4	5.2	2.7
Anthracene	M	2800	mg/kg	0.10		0.60	0.58	0.38	0.38	1.1	1.2	0.48	0.67	0.86
Fluoranthene	M	2800	mg/kg	0.10		6.9	6.3	3.9	5.6	7.3	11	4.9	6.1	4.8
Pyrene	M	2800	mg/kg	0.10		4.6	4.4	2.6	4.1	4.4	8.6	3.3	3.8	3.8
Benzo[a]anthracene	M	2800	mg/kg	0.10		4.3	3.4	1.8	3.0	3.5	6.1	2.8	2.9	3.8
Chrysene	M	2800	mg/kg	0.10		4.2	3.7	2.4	3.5	3.6	5.9	3.1	3.1	4.0
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		5.5	5.1	3.1	4.9	4.0	9.6	4.1	4.1	4.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		2.1	1.7	0.97	1.9	1.4	3.5	1.4	1.3	2.7
Benzo[a]pyrene	M	2800	mg/kg	0.10		3.9	3.6	1.9	3.7	2.7	10	3.0	3.0	3.9
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		3.3	2.9	1.8	3.2	2.1	7.5	2.6	2.2	3.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.90	0.54	0.42	0.63	0.54	1.1	0.56	0.54	2.0
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.3	2.3	1.5	2.3	1.6	5.7	2.0	1.6	3.2
Total Of 16 PAH's	N	2800	mg/kg	2.0		43	39	25	38	39	79	33	36	41
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480
		Client Sample ID.:			3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Bottom Depth (m):			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.3	4.3	4.6	10	8.8	13	11	6.6	4.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	12.0	11.6	11.4	10.5	10.6	9.6	9.8	9.9	10.6
Cyanide (Total)	M	2300	mg/kg	0.50	1.2	4.3	5.3	0.90	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.58	0.67	0.78	1.0	1.0	3.3	3.0	1.4	0.86
Iron (Total)	N	2430	mg/kg	100	27000	27000	26000	29000	29000	29000	26000	32000	30000
Arsenic	M	2450	mg/kg	1.0	14	15	17	14	12	8.5	11	17	17
Cadmium	M	2450	mg/kg	0.10	0.63	0.47	0.77	0.59	0.55	0.86	0.56	0.45	0.43
Chromium	M	2450	mg/kg	1.0	290	280	240	150	180	46	77	67	110
Manganese	M	2450	mg/kg	5.0	22000	18000	18000	7500	8100	2200	3200	5100	6900
Copper	M	2450	mg/kg	0.50	34	25	23	22	23	20	29	23	26
Mercury	M	2450	mg/kg	0.10	0.83	0.69	0.85	0.58	0.56	0.39	0.52	0.25	0.25
Nickel	M	2450	mg/kg	0.50	37	35	33	26	24	18	20	33	34
Lead	M	2450	mg/kg	0.50	170	110	120	140	140	130	150	310	250
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	0.36	0.43	0.95	0.95	0.67	0.25
Vanadium	U	2450	mg/kg	5.0	990	1000	1100	230	220	76	130	240	300
Zinc	M	2450	mg/kg	0.50	120	110	120	160	220	100	140	120	97
Organic Matter	M	2625	%	0.40	8.3	9.8	7.6	13	24	48	72	55	72
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	8.3	4.8	11	8.2	7.9	8.3	11	7.3
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	8.2	8.6	11	25	11	8.4	8.1	9.1
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.4	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	120	29	< 1.0	< 1.0	< 1.0	8.1
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	17	13	140	62	26	17	19	24
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.4	2.1	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	5.6	< 1.0	< 1.0	2.5	< 1.0	7.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	4.6	1.7	7.2	< 1.0	2.2	< 1.0	< 1.0	16
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	4.2	< 1.0	12	28	< 1.0	7.1	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	5.8	6.2	8.8	40	16	1.4	3.0	1.2

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			Chemtest Job No.:		22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545	22-04545
Quotation No.: Q21-24056			Chemtest Sample ID.:		1367472	1367473	1367474	1367475	1367476	1367477	1367478	1367479	1367480
			Client Sample ID.:		3CP63	3CP64	3CP65	3CP66	3CP67	3CP68	3CP69	3CP70	3CP71
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
			Bottom Depth (m):		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
			Date Sampled:		04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022	04-Feb-2022
			Asbestos Lab:		NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	9.6	1.0	15	210	< 1.0	< 1.0	3.6	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	71	4.6	530	500	1.1	23	< 1.0	1.6
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	96	14	580	780	22	36	7.6	26
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	110	27	720	840	48	53	27	50
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.68	0.89	1.3	1.0	< 0.10	2.1	< 0.10	1.7	2.0
Acenaphthylene	N	2800	mg/kg	0.10	0.20	0.24	0.57	0.17	< 0.10	0.19	< 0.10	< 0.10	0.14
Acenaphthene	M	2800	mg/kg	0.10	0.15	0.13	0.20	< 0.10	< 0.10	0.20	< 0.10	0.17	0.38
Fluorene	M	2800	mg/kg	0.10	0.17	0.29	0.51	0.33	< 0.10	0.48	< 0.10	0.22	0.43
Phenanthrene	M	2800	mg/kg	0.10	4.3	2.6	1.9	2.1	1.9	2.9	4.0	2.3	3.0
Anthracene	M	2800	mg/kg	0.10	0.54	0.79	1.8	0.84	0.72	0.76	1.4	0.52	0.75
Fluoranthene	M	2800	mg/kg	0.10	7.3	4.7	11	3.2	1.8	3.0	3.4	2.0	2.9
Pyrene	M	2800	mg/kg	0.10	5.1	3.7	7.0	2.8	1.9	2.4	3.4	1.6	2.5
Benzo[a]anthracene	M	2800	mg/kg	0.10	3.2	3.0	5.2	2.6	1.3	1.6	2.0	0.87	1.3
Chrysene	M	2800	mg/kg	0.10	3.7	3.1	5.3	2.6	1.2	1.8	2.2	1.1	1.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	4.7	3.8	6.1	2.7	1.3	1.8	2.0	1.1	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.8	2.3	2.3	2.0	0.61	0.80	0.89	0.37	0.57
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.5	3.2	4.2	2.5	0.92	1.3	1.7	0.77	1.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.9	2.9	3.5	2.4	< 0.10	1.1	< 0.10	0.53	0.76
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.61	1.5	0.84	1.6	< 0.10	0.55	< 0.10	0.19	0.24
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.5	2.6	2.8	2.1	< 0.10	0.99	< 0.10	0.60	1.0
Total Of 16 PAH's	N	2800	mg/kg	2.0	41	36	55	29	12	22	21	14	20
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-04545	22-04545
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1367481	1367482
		Client Sample ID.:			3CP72	3CP73
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.20	0.20
		Bottom Depth (m):			0.20	0.20
		Date Sampled:			04-Feb-2022	04-Feb-2022
		Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	4.0	5.0
Soil Colour	N	2040		N/A	Black	Black
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	9.9	10.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.1	1.2
Iron (Total)	N	2430	mg/kg	100	32000	31000
Arsenic	M	2450	mg/kg	1.0	16	13
Cadmium	M	2450	mg/kg	0.10	0.17	0.25
Chromium	M	2450	mg/kg	1.0	45	51
Manganese	M	2450	mg/kg	5.0	4400	4700
Copper	M	2450	mg/kg	0.50	27	29
Mercury	M	2450	mg/kg	0.10	0.13	0.17
Nickel	M	2450	mg/kg	0.50	38	28
Lead	M	2450	mg/kg	0.50	360	360
Selenium	M	2450	mg/kg	0.20	0.67	0.59
Vanadium	U	2450	mg/kg	5.0	200	200
Zinc	M	2450	mg/kg	0.50	61	70
Organic Matter	M	2625	%	0.40	91	60
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	7.4	6.5
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	8.0	9.8
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	15	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	300	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	330	16
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	7.2
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	3.9	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	1.5	3.4

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-04545	22-04545
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1367481	1367482
			Client Sample ID.:		3CP72	3CP73
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.20	0.20
			Bottom Depth (m):		0.20	0.20
			Date Sampled:		04-Feb-2022	04-Feb-2022
			Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	21	7.4
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	110	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140	18
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	460	34
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	2.7	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.15	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.39	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.36	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	3.5	0.44
Anthracene	M	2800	mg/kg	0.10	0.76	0.12
Fluoranthene	M	2800	mg/kg	0.10	3.0	0.95
Pyrene	M	2800	mg/kg	0.10	2.6	0.81
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.4	0.74
Chrysene	M	2800	mg/kg	0.10	1.7	0.77
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6	1.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.51	0.48
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.3	1.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.77	0.74
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.27	0.26
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.93	0.67
Total Of 16 PAH's	N	2800	mg/kg	2.0	22	8.4
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-05118-1
Initial Date of Issue:	17-Feb-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	7
Turnaround (Wkdays):	3
Date Approved:	17-Feb-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	11-Feb-2022
Date Instructed:	11-Feb-2022
Results Due:	15-Feb-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1370291	1370292	1370293	1370294	1370295	1370296	1370297
		Client Sample ID.:			3CP1-47	3CP1-48	3CP1-49	3CP1-50	3CP1-51	3CP1-52	3CP1-53
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type	U	2192		N/A	-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	8.7	8.0	6.6	9.9	8.8	6.7	7.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Grey	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	9.3	11.0	11.5	12.0	> 12.0	> 12.0	> 12.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	12	10	5.3	2.6	2.0	1.5	1.3
Iron (Total)	N	2430	mg/kg	100	200000	120000	140000	150000	140000	140000	130000
Arsenic	M	2450	mg/kg	1.0	14	15	17	22	20	20	22
Cadmium	M	2450	mg/kg	0.10	0.85	0.83	0.83	0.53	0.43	0.25	0.46
Chromium	M	2450	mg/kg	1.0	70	280	390	480	420	550	550
Manganese	M	2450	mg/kg	5.0	4900	23000	24000	36000	32000	38000	43000
Copper	M	2450	mg/kg	0.50	23	25	25	52	31	25	29
Mercury	M	2450	mg/kg	0.10	0.37	0.27	0.34	0.73	0.66	0.48	0.54
Nickel	M	2450	mg/kg	0.50	32	39	37	46	41	40	41
Lead	M	2450	mg/kg	0.50	88	63	69	61	53	26	37
Selenium	M	2450	mg/kg	0.20	0.27	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	91	1400	1600	1600	1600	2200	2300
Zinc	M	2450	mg/kg	0.50	240	130	140	120	110	69	78
Organic Matter	M	2625	%	0.40	12	3.3	2.6	6.7	3.6	2.6	2.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	190	160	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	190	160	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	290	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118	22-05118
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1370291	1370292	1370293	1370294	1370295	1370296	1370297
					Client Sample ID.:	3CP1-47	3CP1-48	3CP1-49	3CP1-50	3CP1-51	3CP1-52	3CP1-53
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Date Sampled:	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022	10-Feb-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	290	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	480	160	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		22	18	11	9.7	6.9	5.3	6.6
Acenaphthylene	N	2800	mg/kg	0.10		2.0	0.30	0.32	0.25	0.25	0.10	0.19
Acenaphthene	M	2800	mg/kg	0.10		1.4	1.8	0.80	1.2	0.90	0.45	0.58
Fluorene	M	2800	mg/kg	0.10		2.1	0.50	0.52	0.31	0.26	< 0.10	0.14
Phenanthrene	M	2800	mg/kg	0.10		14	4.7	5.5	4.7	3.9	1.5	2.9
Anthracene	M	2800	mg/kg	0.10		3.7	1.1	1.0	0.58	0.54	0.21	0.35
Fluoranthene	M	2800	mg/kg	0.10		19	8.5	6.1	6.4	6.1	2.2	4.9
Pyrene	M	2800	mg/kg	0.10		13	7.2	4.1	5.1	4.7	1.5	3.6
Benzo[a]anthracene	M	2800	mg/kg	0.10		6.8	4.6	2.9	3.3	3.5	0.99	3.0
Chrysene	M	2800	mg/kg	0.10		7.3	5.1	3.3	4.0	4.0	1.3	3.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		8.9	7.5	4.1	5.2	5.4	1.5	4.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		2.9	2.7	1.5	1.9	2.0	0.48	1.6
Benzo[a]pyrene	M	2800	mg/kg	0.10		7.0	6.3	3.1	4.5	4.6	1.0	3.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		5.5	5.1	2.8	3.4	3.7	1.1	2.5
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.97	0.88	0.57	0.70	0.70	0.20	0.59
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		4.8	4.8	2.6	3.5	3.5	0.93	2.6
Total Of 16 PAH's	N	2800	mg/kg	2.0		120	79	50	55	51	19	41
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-23919-1
Initial Date of Issue:	01-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	01-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	27-Jun-2022
Date Instructed:	27-Jun-2022
Results Due:	01-Jul-2022

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-14707-1
Initial Date of Issue:	25-Apr-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	12
Turnaround (Wkdays):	3
Date Approved:	25-Apr-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	21-Apr-2022
Date Instructed:	21-Apr-2022
Results Due:	25-Apr-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1414486	1414487	1414488	1414489	1414490	1414491	1414492	1414493	1414494
		Client Sample ID.:			5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP2-1	5e1-SP2-2	5e1-SP2-3	4H-SV12	4H-SV13	4H-SV14
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	41	39	35	27	27	39	37	57	37
Soil Colour	N	2040		N/A	Brown	Black	Black	Brown	Brown	Grey	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.7	11.1	11.0	10.4	9.9	10.7	9.4	10.6	10.1
Cyanide (Total)	M	2300	mg/kg	0.50	4.3	< 0.50	< 0.50	< 0.50	5.9	< 0.50	8.5	0.50	0.60
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	3.9	11	7.3	10	0.93	3.9	2.6	6.5
Iron (Total)	N	2430	mg/kg	100	24000	40000	39000	30000	31000	35000	30000	30000	30000
Arsenic	M	2450	mg/kg	1.0	7.4	12	8.8	6.0	6.4	9.0	11	13	6.2
Cadmium	M	2450	mg/kg	0.10	0.44	0.56	0.16	0.24	0.35	0.39	0.36	0.36	0.36
Chromium	M	2450	mg/kg	1.0	74	58	50	35	28	210	41	49	39
Manganese	M	2450	mg/kg	5.0	4500	3600	2800	2400	1500	16000	3100	3500	2500
Copper	M	2450	mg/kg	0.50	11	13	12	11	12	26	20	16	12
Mercury	M	2450	mg/kg	0.10	< 0.10	0.26	0.10	< 0.10	0.29	0.36	0.44	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	15	19	17	17	13	31	24	21	13
Lead	M	2450	mg/kg	0.50	25	34	26	29	46	58	52	46	42
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.23	0.29	0.27	0.22	0.60	0.25	0.43
Vanadium	U	2450	mg/kg	5.0	70	130	72	75	57	810	73	70	83
Zinc	M	2450	mg/kg	0.50	70	83	58	88	120	100	110	110	120
Organic Matter	M	2625	%	0.40	10	14	17	7.9	21	3.8	11	10	5.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	310	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	830	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	2500	< 1.0	< 1.0	210	210	< 1.0	280	1100	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	3700	< 5.0	< 5.0	210	210	< 5.0	280	1100	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	36	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	43	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	37	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707	22-14707
Quotation No.: Q21-24056					Chemtest Sample ID.:	1414486	1414487	1414488	1414489	1414490	1414491	1414492	1414493	1414494
					Client Sample ID.:	5e1-SP1-1	5e1-SP1-2	5e1-SP1-3	5e1-SP2-1	5e1-SP2-2	5e1-SP2-3	4H-SV12	4H-SV13	4H-SV14
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
					Bottom Depth (m):	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
					Date Sampled:	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022	19-Apr-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		820	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	540	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		840	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	120	540	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		4500	< 10	< 10	210	210	< 10	390	1700	< 10
Benzene	M	2760	µg/kg	1.0		21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	120	37	< 1.0
Toluene	M	2760	µg/kg	1.0		9.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	97	24	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		6.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.6	2.6	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	46	13	< 1.0
o-Xylene	M	2760	µg/kg	1.0		9.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	17	3.4	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		7.5	1.3	3.0	< 0.10	2.4	0.59	34	2.1	1.3
Acenaphthylene	N	2800	mg/kg	0.10		0.47	0.12	0.32	< 0.10	0.26	0.16	0.41	0.19	0.42
Acenaphthene	M	2800	mg/kg	0.10		0.30	0.14	0.36	< 0.10	0.15	< 0.10	0.99	0.12	0.19
Fluorene	M	2800	mg/kg	0.10		0.52	0.25	0.49	< 0.10	0.39	0.17	0.93	0.27	0.41
Phenanthrene	M	2800	mg/kg	0.10		2.8	1.5	3.4	0.83	2.8	1.4	1.9	1.8	3.8
Anthracene	M	2800	mg/kg	0.10		0.86	0.35	0.68	0.24	0.56	0.30	0.59	0.45	1.2
Fluoranthene	M	2800	mg/kg	0.10		4.6	1.8	4.5	1.2	2.8	2.1	2.6	2.4	6.1
Pyrene	M	2800	mg/kg	0.10		3.6	1.3	3.4	0.98	2.3	1.4	2.1	1.6	4.5
Benzo[a]anthracene	M	2800	mg/kg	0.10		2.3	0.89	2.2	0.72	1.2	0.99	1.2	0.94	3.0
Chrysene	M	2800	mg/kg	0.10		2.3	0.76	1.8	0.68	1.1	1.2	1.3	0.78	3.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		3.0	1.3	3.1	0.62	1.9	1.0	1.9	1.5	4.4
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.96	0.34	1.0	0.25	0.24	0.33	0.58	0.49	1.5
Benzo[a]pyrene	M	2800	mg/kg	0.10		2.5	1.1	2.6	0.73	1.3	0.87	1.4	1.0	3.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		1.9	0.65	1.7	0.61	0.94	0.74	0.93	0.74	2.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.44	0.12	0.51	0.14	0.15	0.26	0.27	0.19	0.48
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		1.6	0.68	1.6	0.57	0.96	0.68	1.1	0.74	2.4
Total Of 16 PAH's	N	2800	mg/kg	2.0		36	13	31	7.6	20	12	52	15	39
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14707	22-14707	22-14707
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1414495	1414496	1414497
		Client Sample ID.:			4H-SV15	4H-SV16	4H-SV17
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			0.2	0.2	0.2
		Bottom Depth (m):			0.2	0.2	0.2
		Date Sampled:			19-Apr-2022	19-Apr-2022	19-Apr-2022
		Asbestos Lab:				NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected	
Moisture	N	2030	%	0.020	44	37	46
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.8	10.1	9.9
Cyanide (Total)	M	2300	mg/kg	0.50	3.9	< 0.50	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	3.3	0.72	6.0
Iron (Total)	N	2430	mg/kg	100	32000	34000	31000
Arsenic	M	2450	mg/kg	1.0	9.0	7.8	38
Cadmium	M	2450	mg/kg	0.10	0.44	0.54	0.44
Chromium	M	2450	mg/kg	1.0	45	60	52
Manganese	M	2450	mg/kg	5.0	3100	3200	3600
Copper	M	2450	mg/kg	0.50	14	16	15
Mercury	M	2450	mg/kg	0.10	0.12	0.20	< 0.10
Nickel	M	2450	mg/kg	0.50	18	16	15
Lead	M	2450	mg/kg	0.50	50	67	52
Selenium	M	2450	mg/kg	0.20	0.32	0.38	0.44
Vanadium	U	2450	mg/kg	5.0	59	90	100
Zinc	M	2450	mg/kg	0.50	120	170	140
Organic Matter	M	2625	%	0.40	7.8	4.7	4.8
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	12	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	12	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14707	22-14707	22-14707
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1414495	1414496	1414497
			Client Sample ID.:		4H-SV15	4H-SV16	4H-SV17
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.2	0.2
			Bottom Depth (m):		0.2	0.2	0.2
			Date Sampled:		19-Apr-2022	19-Apr-2022	19-Apr-2022
			Asbestos Lab:			NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	67	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	67	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	79	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	26	9.4
Toluene	M	2760	µg/kg	1.0	< 1.0	11	4.8
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	6.1	3.4	1.3
Acenaphthylene	N	2800	mg/kg	0.10	0.32	0.56	0.36
Acenaphthene	M	2800	mg/kg	0.10	0.25	0.21	0.17
Fluorene	M	2800	mg/kg	0.10	0.35	0.42	0.77
Phenanthrene	M	2800	mg/kg	0.10	2.3	2.7	4.2
Anthracene	M	2800	mg/kg	0.10	0.65	0.94	0.87
Fluoranthene	M	2800	mg/kg	0.10	3.8	4.6	4.9
Pyrene	M	2800	mg/kg	0.10	2.9	3.6	3.5
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.8	2.3	2.3
Chrysene	M	2800	mg/kg	0.10	1.8	2.0	2.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.5	3.3	3.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.83	1.2	0.98
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.8	2.4	2.3
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.2	1.8	1.6
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.26	0.37	0.37
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.3	1.8	1.4
Total Of 16 PAH's	N	2800	mg/kg	2.0	28	32	30
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-15876-1
Initial Date of Issue:	05-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	5
Turnaround (Wkdays):	5
Date Approved:	05-May-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	29-Apr-2022
Date Instructed:	29-Apr-2022
Results Due:	06-May-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-15876	22-15876	22-15876	22-15876	22-15876
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1419723	1419724	1419725	1419726	1419727
		Client Sample ID.:			5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP2-4
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.20	0.20	0.20	0.20	0.20
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A	-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	7.3	3.7	3.6	8.4	1.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	9.2	10.2	9.6	9.0
Cyanide (Total)	M	2300	mg/kg	0.50	1.5	< 0.50	< 0.50	1.2	3.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	20	4.0	0.86	11	20
Iron (Total)	N	2430	mg/kg	100	44000	51000	50000	30000	39000
Arsenic	M	2455	mg/kg	0.5	26	37	35	12	16
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.75	< 0.10	< 0.10	0.66
Chromium	M	2455	mg/kg	0.5	57	66	46	23	66
Manganese	M	2455	mg/kg	1.0	1400	10000	5500	900	4500
Copper	M	2455	mg/kg	0.50	26	98	35	27	25
Mercury	M	2455	mg/kg	0.05	0.15	1.3	0.12	0.06	0.14
Nickel	M	2455	mg/kg	0.50	28	32	28	24	31
Lead	M	2455	mg/kg	0.50	33	210	72	30	110
Selenium	M	2455	mg/kg	0.25	1.5	1.4	0.89	1.7	1.6
Vanadium	U	2455	mg/kg	0.5	100	150	140	46	170
Zinc	M	2455	mg/kg	0.50	100	440	120	64	350
Organic Matter	M	2625	%	0.40	5.5	3.3	0.98	12	13
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	40	< 1.0	< 1.0	< 1.0	240
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	40	< 5.0	< 5.0	< 5.0	240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	20	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	120	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-15876	22-15876	22-15876	22-15876	22-15876
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1419723	1419724	1419725	1419726	1419727
			Client Sample ID.:		5e1-SP1-4	5e1-SP1-5	5e1-SP1-6	5e1-SP1-7	5e1-SP2-4
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20
			Date Sampled:		28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
			Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	190	< 1.0	< 1.0	< 1.0	190
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	330	< 5.0	< 5.0	< 5.0	190
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	370	< 10	< 10	< 10	440
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.2	< 0.10	0.31	1.3	1.1
Acenaphthylene	N	2800	mg/kg	0.10	0.17	< 0.10	0.22	0.29	0.12
Acenaphthene	M	2800	mg/kg	0.10	2.7	< 0.10	0.16	0.17	0.18
Fluorene	M	2800	mg/kg	0.10	4.3	< 0.10	0.15	0.44	0.14
Phenanthrene	M	2800	mg/kg	0.10	57	0.55	0.60	2.4	0.94
Anthracene	M	2800	mg/kg	0.10	11	< 0.10	0.17	0.56	0.14
Fluoranthene	M	2800	mg/kg	0.10	40	0.39	0.50	2.4	0.99
Pyrene	M	2800	mg/kg	0.10	29	0.45	0.54	1.7	0.73
Benzo[a]anthracene	M	2800	mg/kg	0.10	11	< 0.10	0.20	0.85	0.62
Chrysene	M	2800	mg/kg	0.10	11	< 0.10	0.18	0.80	0.60
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	9.4	< 0.10	0.22	0.93	0.89
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	3.5	< 0.10	0.14	0.39	0.32
Benzo[a]pyrene	M	2800	mg/kg	0.10	6.8	< 0.10	0.20	0.71	0.68
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	3.6	< 0.10	0.20	0.43	0.43
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.91	< 0.10	0.12	0.24	0.24
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	3.3	< 0.10	0.18	0.44	0.43
Total Of 16 PAH's	N	2800	mg/kg	2.0	200	< 2.0	4.1	14	8.5
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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I/S	Insufficient Sample
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N/E	not evaluated
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LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation
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None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-19583-1
Initial Date of Issue:	01-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	10
Turnaround (Wkdays):	5
Date Approved:	01-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	26-May-2022
Date Instructed:	26-May-2022
Results Due:	01-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
		Sample Location:			5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		Fibres/Clumps		Fibres/Clumps	-		-		-
Asbestos Identification	U	2192		N/A		Chrysotile		Chrysotile	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	22	15	8.9	9.5	25	15	16	13	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.1	10.4	9.4	9.2	8.1	9.5	8.6	10.0	8.3
Cyanide (Total)	M	2300	mg/kg	0.50	4.3	7.0	4.5	5.7	< 0.50	< 0.50	< 0.50	< 0.50	1.4
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	22	21	21	17	50	2.9	22	2.7	33
Iron (Total)	N	2430	mg/kg	100	29000	30000	27000	26000	22000	32000	33000	29000	22000
Arsenic	M	2455	mg/kg	0.5	10	8.1	7.2	7.0	14	17	10	15	8.8
Cadmium	M	2455	mg/kg	0.10	0.34	0.45	0.29	0.32	< 0.10	0.24	0.25	0.12	0.18
Chromium	M	2455	mg/kg	0.5	34	26	31	26	28	39	18	37	12
Manganese	M	2455	mg/kg	1.0	1800	1600	1500	1300	370	3900	1200	3200	580
Copper	M	2455	mg/kg	0.50	21	19	18	20	8.4	21	20	7.7	17
Mercury	M	2455	mg/kg	0.05	0.35	0.60	0.44	0.63	< 0.05	0.18	0.07	0.05	0.10
Nickel	M	2455	mg/kg	0.50	22	20	18	20	25	17	20	15	20
Lead	M	2455	mg/kg	0.50	55	82	42	54	18	45	48	21	33
Selenium	M	2455	mg/kg	0.25	1.2	1.1	0.99	0.87	0.86	2.9	1.7	2.0	3.5
Vanadium	U	2455	mg/kg	0.5	46	35	37	32	34	90	44	78	27
Zinc	M	2455	mg/kg	0.50	120	140	100	120	58	96	94	61	47
Organic Matter	M	2625	%	0.40	12	14	8.5	17	1.6	3.1	8.3	2.2	5.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	11	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	8.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	91	< 1.0	< 1.0	< 1.0	< 1.0	150	61	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	150	61	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	5.6	< 1.0	4.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	180	< 1.0	200	< 1.0	< 1.0	630	140	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
					Sample Location:	5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Date Sampled:	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
					Asbestos Lab:		DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	200	< 5.0	220	< 5.0	< 5.0	630	140	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	350	< 10	220	< 10	< 10	780	200	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		3.2	3.9	4.2	5.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		0.22	0.35	0.40	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		0.11	0.13	0.17	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		0.22	0.32	0.19	0.44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		1.3	1.7	2.1	2.8	< 0.10	< 0.10	0.68	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10		0.48	1.7	0.63	0.59	< 0.10	< 0.10	0.14	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10		2.0	2.3	3.2	4.5	< 0.10	0.89	0.43	0.40	0.28
Pyrene	M	2800	mg/kg	0.10		1.4	1.6	2.3	3.3	< 0.10	0.65	0.38	0.31	0.17
Benzo[a]anthracene	M	2800	mg/kg	0.10		1.0	1.0	1.4	2.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10		0.97	1.3	1.7	2.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.1	1.9	2.0	3.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.57	1.7	0.71	0.99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.86	1.2	1.6	2.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.63	0.82	1.2	2.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.15	0.21	0.29	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.58	1.1	1.0	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		15	21	23	34	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Moisture	N	2030	%	0.020	12
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
pH	M	2010		4.0	9.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.6
Iron (Total)	N	2430	mg/kg	100	36000
Arsenic	M	2455	mg/kg	0.5	21
Cadmium	M	2455	mg/kg	0.10	0.28
Chromium	M	2455	mg/kg	0.5	41
Manganese	M	2455	mg/kg	1.0	3700
Copper	M	2455	mg/kg	0.50	23
Mercury	M	2455	mg/kg	0.05	0.26
Nickel	M	2455	mg/kg	0.50	20
Lead	M	2455	mg/kg	0.50	71
Selenium	M	2455	mg/kg	0.25	1.4
Vanadium	U	2455	mg/kg	0.5	100
Zinc	M	2455	mg/kg	0.50	150
Organic Matter	M	2625	%	0.40	7.4
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	4.7
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	15
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	51
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	71
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	140

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	210
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.1
Acenaphthylene	N	2800	mg/kg	0.10	0.22
Acenaphthene	M	2800	mg/kg	0.10	0.29
Fluorene	M	2800	mg/kg	0.10	0.29
Phenanthrene	M	2800	mg/kg	0.10	1.9
Anthracene	M	2800	mg/kg	0.10	0.36
Fluoranthene	M	2800	mg/kg	0.10	1.8
Pyrene	M	2800	mg/kg	0.10	1.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0
Chrysene	M	2800	mg/kg	0.10	0.94
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.63
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.71
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.12
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.75
Total Of 16 PAH's	N	2800	mg/kg	2.0	15
Resorcinol	M	2920	mg/kg	0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Amended Report

Report No.:	22-19583-2		
Initial Date of Issue:	01-Jun-2022	**Date of Re-Issue:**	08-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:**	26-May-2022
Order No.:	PO115623	**Date Instructed:**	26-May-2022
No. of Samples:	10		
Turnaround (Wkdays):	10	**Results Due:**	10-Jun-2022
Date Approved:	08-Jun-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
		Sample Location:			5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		Fibres/Clumps		Fibres/Clumps	-		-		-
Asbestos Identification	U	2192		N/A		Chrysotile		Chrysotile	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001		0.001		0.002					
Total Asbestos	U	2192	%	0.001		0.001		0.002					
Moisture	N	2030	%	0.020	22	15	8.9	9.5	25	15	16	13	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Grey	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.1	10.4	9.4	9.2	8.1	9.5	8.6	10.0	8.3
Cyanide (Total)	M	2300	mg/kg	0.50	4.3	7.0	4.5	5.7	< 0.50	< 0.50	< 0.50	< 0.50	1.4
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	22	21	21	17	50	2.9	22	2.7	33
Iron (Total)	N	2430	mg/kg	100	29000	30000	27000	26000	22000	32000	33000	29000	22000
Arsenic	M	2455	mg/kg	0.5	10	8.1	7.2	7.0	14	17	10	15	8.8
Cadmium	M	2455	mg/kg	0.10	0.34	0.45	0.29	0.32	< 0.10	0.24	0.25	0.12	0.18
Chromium	M	2455	mg/kg	0.5	34	26	31	26	28	39	18	37	12
Manganese	M	2455	mg/kg	1.0	1800	1600	1500	1300	370	3900	1200	3200	580
Copper	M	2455	mg/kg	0.50	21	19	18	20	8.4	21	20	7.7	17
Mercury	M	2455	mg/kg	0.05	0.35	0.60	0.44	0.63	< 0.05	0.18	0.07	0.05	0.10
Nickel	M	2455	mg/kg	0.50	22	20	18	20	25	17	20	15	20
Lead	M	2455	mg/kg	0.50	55	82	42	54	18	45	48	21	33
Selenium	M	2455	mg/kg	0.25	1.2	1.1	0.99	0.87	0.86	2.9	1.7	2.0	3.5
Vanadium	U	2455	mg/kg	0.5	46	35	37	32	34	90	44	78	27
Zinc	M	2455	mg/kg	0.50	120	140	100	120	58	96	94	61	47
Organic Matter	M	2625	%	0.40	12	14	8.5	17	1.6	3.1	8.3	2.2	5.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	11	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	8.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	28	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	91	< 1.0	< 1.0	< 1.0	< 1.0	150	61	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	150	61	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	5.6	< 1.0	4.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583	22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1435992	1435993	1435994	1435995	1435996	1435997	1435998	1435999	1436000
			Sample Location:		5e1-SP3-1	5e1-SP3-2	5e1-SP3-3	5e1-SP3-4	AJ29-C	5e1-SP1-8	5e1-SP1-9	5e1-SP1-10	5e1-SP1-11
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Date Sampled:		24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022	24-May-2022
			Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	18	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	180	< 1.0	200	< 1.0	< 1.0	630	140	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	200	< 5.0	220	< 5.0	< 5.0	630	140	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	350	< 10	220	< 10	< 10	780	200	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.2	3.9	4.2	5.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	0.22	0.35	0.40	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	0.11	0.13	0.17	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	0.22	0.32	0.19	0.44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.3	1.7	2.1	2.8	< 0.10	< 0.10	0.68	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.48	1.7	0.63	0.59	< 0.10	< 0.10	0.14	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	2.0	2.3	3.2	4.5	< 0.10	0.89	0.43	0.40	0.28
Pyrene	M	2800	mg/kg	0.10	1.4	1.6	2.3	3.3	< 0.10	0.65	0.38	0.31	0.17
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0	1.0	1.4	2.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.97	1.3	1.7	2.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.1	1.9	2.0	3.6	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.57	1.7	0.71	0.99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.86	1.2	1.6	2.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.63	0.82	1.2	2.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.15	0.21	0.29	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.58	1.1	1.0	1.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	15	21	23	34	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192		N/A	
Asbestos by Gravimetry	U	2192	%	0.001	
Total Asbestos	U	2192	%	0.001	
Moisture	N	2030	%	0.020	12
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
pH	M	2010		4.0	9.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.6
Iron (Total)	N	2430	mg/kg	100	36000
Arsenic	M	2455	mg/kg	0.5	21
Cadmium	M	2455	mg/kg	0.10	0.28
Chromium	M	2455	mg/kg	0.5	41
Manganese	M	2455	mg/kg	1.0	3700
Copper	M	2455	mg/kg	0.50	23
Mercury	M	2455	mg/kg	0.05	0.26
Nickel	M	2455	mg/kg	0.50	20
Lead	M	2455	mg/kg	0.50	71
Selenium	M	2455	mg/kg	0.25	1.4
Vanadium	U	2455	mg/kg	0.5	100
Zinc	M	2455	mg/kg	0.50	150
Organic Matter	M	2625	%	0.40	7.4
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	4.7
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	15
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	51
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	71
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-19583
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1436001
			Sample Location:		5e1-SP1-12
			Sample Type:		SOIL
			Date Sampled:		24-May-2022
			Asbestos Lab:		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	140
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	140
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	210
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.1
Acenaphthylene	N	2800	mg/kg	0.10	0.22
Acenaphthene	M	2800	mg/kg	0.10	0.29
Fluorene	M	2800	mg/kg	0.10	0.29
Phenanthrene	M	2800	mg/kg	0.10	1.9
Anthracene	M	2800	mg/kg	0.10	0.36
Fluoranthene	M	2800	mg/kg	0.10	1.8
Pyrene	M	2800	mg/kg	0.10	1.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.0
Chrysene	M	2800	mg/kg	0.10	0.94
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.63
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.71
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.12
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.75
Total Of 16 PAH's	N	2800	mg/kg	2.0	15
Resorcinol	M	2920	mg/kg	0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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Final Report

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

Date Received:	07-Jun-2022
Date Instructed:	07-Jun-2022
Results Due:	13-Jun-2022

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Results - Water

Project: P18-669

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

Results - Water

Project: P18-669

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

Results - Water

Project: P18-669

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

Results - Water

Project: P18-669

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

Results - Water

Project: P18-669

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

Results - Water

Project: P18-669

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

Test Methods

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

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.:	22-31543-1
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

Final Report

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
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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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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

PRELIMINARY/INTERIM REPORT

Date of report Generation:	22 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210114-154
Your Reference:	P18-669
Location:	Llanwern
Report No:	584152

We received 33 samples on Wednesday January 13, 2021 and 33 of these samples were scheduled for analysis which was completed on Friday January 22, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

This is a preliminary report which has not had final authorisation

Approved By:

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23543943	AO21-1		0.90 - 0.90	11/01/2021
23543949	AO21-2		1.60 - 1.60	11/01/2021
23543955	AO21-3		2.50 - 2.50	11/01/2021
23544156	AP21-1		0.30 - 0.30	11/01/2021
23544165	AP21-2		1.90 - 1.90	11/01/2021
23543938	AP21-3		2.40 - 2.40	11/01/2021
23544143	AQ21-1		0.40 - 0.40	11/01/2021
23544149	AQ21-2		1.90 - 1.90	11/01/2021
23544096	AR21-1		0.30 - 0.30	11/01/2021
23544133	AR21-2		1.20 - 1.20	11/01/2021
23544137	AR21-3		2.00 - 2.00	11/01/2021
23543930	AS20-1		0.40 - 0.40	11/01/2021
23544000	AS20-2		1.70 - 1.70	11/01/2021
23543960	AT20-1		0.30 - 0.30	12/01/2021
23543966	AT20-2		1.00 - 1.00	12/01/2021
23544071	AT21-1		0.30 - 0.30	12/01/2021
23544080	AT21-2		1.90 - 1.90	12/01/2021
23544090	AT22-1		0.40 - 0.40	12/01/2021
23544110	AT22-2		1.00 - 1.00	12/01/2021
23544114	AT22-3		2.50 - 2.50	12/01/2021
23543974	AU20-1		0.40 - 0.40	12/01/2021
23543980	AU20-2		1.60 - 1.60	12/01/2021
23544054	AU21-1		0.40 - 0.40	12/01/2021
23544062	AU21-2		1.50 - 1.50	12/01/2021
23544119	AU22-1		0.50 - 0.50	12/01/2021
23544127	AU22-2		1.40 - 1.40	12/01/2021
23543984	AV20-1		0.50 - 0.50	12/01/2021
23544032	AV21-1		0.40 - 0.40	12/01/2021
23544041	AV21-2		1.60 - 1.60	12/01/2021
23543990	AW20-1		0.30 - 0.30	12/01/2021
23544006	AW20-2		2.00 - 2.00	12/01/2021
23544014	AW21-1		0.50 - 0.50	12/01/2021
23544023	AW21-2		1.50 - 1.50	12/01/2021

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

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23543930	AS20-1		0.40 - 0.40	1kg TUB with Handle (ALE260)	S
			23543930	AS20-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23543930	AS20-1		0.40 - 0.40	60g VOC (ALE215)	S
			23543960	AT20-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
			23543960	AT20-1		0.30 - 0.30	60g VOC (ALE215)	S
			23543974	AU20-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23543974	AU20-1		0.40 - 0.40	60g VOC (ALE215)	S
			23543984	AV20-1		0.50 - 0.50	1kg TUB with Handle (ALE260)	S
			23543984	AV20-1		0.50 - 0.50	250g Amber Jar (ALE210)	S
			23543984	AV20-1		0.50 - 0.50	60g VOC (ALE215)	S
			23543990	AW20-1		0.30 - 0.30	1kg TUB with Handle (ALE260)	S
			23543990	AW20-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
			23543990	AW20-1		0.30 - 0.30	60g VOC (ALE215)	S
			23544000	AS20-2		1.70 - 1.70	250g Amber Jar (ALE210)	S
			23544000	AS20-2		1.70 - 1.70	60g VOC (ALE215)	S
			23543966	AT20-2		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
			23543966	AT20-2		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23543966	AT20-2		1.00 - 1.00	60g VOC (ALE215)	S
			23543980	AU20-2		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33		X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17	X					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4						
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33		X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 33		X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33			X			
Metals in solid samples by OES	All	NDPs: 0 Tests: 33		X				
PAH by GCMS	All	NDPs: 0 Tests: 33		X				
pH	All	NDPs: 0 Tests: 33		X				
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33		X				
Sample description	All	NDPs: 0 Tests: 32		X				
Total Organic Carbon	All	NDPs: 0 Tests: 33		X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 33		X				
VOC MS (S)	All	NDPs: 0 Tests: 33			X			
			23543930	AS20-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23543930	AS20-1		0.40 - 0.40	60g VOC (ALE215)	S
			23543960	AT20-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
			23543960	AT20-1		0.30 - 0.30	60g VOC (ALE215)	S
			23543974	AU20-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23543974	AU20-1		0.40 - 0.40	60g VOC (ALE215)	S
			23543984	AV20-1		0.50 - 0.50	1kg TUB with Handle (ALE260)	S
			23543984	AV20-1		0.50 - 0.50	250g Amber Jar (ALE210)	S
			23543984	AV20-1		0.50 - 0.50	60g VOC (ALE215)	S
			23543990	AW20-1		0.30 - 0.30	1kg TUB with Handle (ALE260)	S
			23543990	AW20-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
			23543990	AW20-1		0.30 - 0.30	60g VOC (ALE215)	S
			23544000	AS20-2		1.70 - 1.70	250g Amber Jar (ALE210)	S
			23544000	AS20-2		1.70 - 1.70	60g VOC (ALE215)	S
			23543966	AT20-2		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
			23543966	AT20-2		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23543966	AT20-2		1.00 - 1.00	60g VOC (ALE215)	S
			23543980	AU20-2		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33		X				
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17	X					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4						
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33		X				
EPH CWG GC (S)	All	NDPs: 0 Tests: 33		X				
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33			X			
Metals in solid samples by OES	All	NDPs: 0 Tests: 33		X				
PAH by GCMS	All	NDPs: 0 Tests: 33		X				
pH	All	NDPs: 0 Tests: 33		X				
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33		X				
Sample description	All	NDPs: 0 Tests: 32		X				
Total Organic Carbon	All	NDPs: 0 Tests: 33		X				
TPH CWG GC (S)	All	NDPs: 0 Tests: 33		X				
VOC MS (S)	All	NDPs: 0 Tests: 33			X			

23543938	AP21-3		2.40 - 2.40	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S																				X								
				1kg TUB with Handle (ALE260)	S		X						X		X				X		X		X				X		X		X		
23543955	AO21-3		2.50 - 2.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X																								
23544023	AW21-2		1.50 - 1.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23543949	AO21-2		1.60 - 1.60	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X				X		X		
23544014	AW21-1		0.50 - 0.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S																				X								
				1kg TUB with Handle (ALE260)	S		X		X				X		X				X		X		X				X		X		X		
23544032	AV21-1		0.40 - 0.40	1kg TUB with Handle (ALE260)	S				X																								
23543943	AO21-1		0.90 - 0.90	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X																								
23544006	AW20-2		2.00 - 2.00	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23543980	AU20-2		1.60 - 1.60	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		

Preliminary

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23544156	23544143		23544096			23544071			23544054		23544032		23544149		23544133			
Customer Sample Reference			AP21-1	AQ21-1		AR21-1			AT21-1			AU21-1		AV21-1		AQ21-2		AR21-2			
AGS Reference																					
Depth (m)			0.30 - 0.30	0.40 - 0.40		0.30 - 0.30			0.30 - 0.30			0.40 - 0.40		0.40 - 0.40		1.90 - 1.90		1.20 - 1.20			
Container			250g Amber Jar (ALE210)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17				X			X			X					X					
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4							X												
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33			X			X			X			X		X			X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
pH	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
Sample description	All	NDPs: 0 Tests: 32	X	X			X			X			X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 33	X	X			X			X			X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 33			X			X			X			X		X			X			X

23544114	AT22-3		2.50 - 2.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23544127	AU22-2		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				
				1kg TUB with Handle (ALE260)	S		x																
23544110	AT22-2		1.00 - 1.00	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23544119	AU22-1		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				
23544090	AT22-1		0.40 - 0.40	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x	x			x	x		x	x	x	x	x	x	x				
23544137	AR21-3		2.00 - 2.00	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23544041	AV21-2		1.60 - 1.60	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23544062	AU21-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23544080	AT21-2		1.90 - 1.90	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X **Test**

N **No Determination Possible**

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

Lab Sample No(s)			23544156			23544165
Customer Sample Reference			AP21-1			AP21-2
AGS Reference						
Depth (m)			0.30 - 0.30			1.90 - 1.90
Container			60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 33			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 17		X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 4		X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 33			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 33			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 33	X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 33			X	
PAH by GCMS	All	NDPs: 0 Tests: 33			X	
pH	All	NDPs: 0 Tests: 33			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 33			X	
Sample description	All	NDPs: 0 Tests: 32			X	
Total Organic Carbon	All	NDPs: 0 Tests: 33			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 33			X	
VOC MS (S)	All	NDPs: 0 Tests: 33	X			X

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23543943	AO21-1	0.90 - 0.90	Dark Brown	Sandy Loam	Stones	None
23543949	AO21-2	1.60 - 1.60	Dark Brown	Sandy Loam	Stones	N/A
23543955	AO21-3	2.50 - 2.50	Dark Brown	Sand	Stones	Brick
23544156	AP21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	Vegetation
23544165	AP21-2	1.90 - 1.90	Dark Brown	Sandy Loam	Stones	None
23543938	AP21-3	2.40 - 2.40	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23544143	AQ21-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23544149	AQ21-2	1.90 - 1.90	Dark Brown	Sandy Loam	Stones	N/A
23544096	AR21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23544133	AR21-2	1.20 - 1.20	Black	Sand	Stones	None
23544137	AR21-3	2.00 - 2.00	Dark Brown	Sand	Brick	Stones
23543930	AS20-1	0.40 - 0.40	Dark Brown	Loamy Sand	Stones	None
23544000	AS20-2	1.70 - 1.70	Light Brown	Sand	Stones	Brick
23543960	AT20-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	N/A
23543966	AT20-2	1.00 - 1.00	Dark Brown	Sand	Stones	None
23544071	AT21-1	0.30 - 0.30	Dark Brown	Sand	None	Stones
23544080	AT21-2	1.90 - 1.90	Dark Brown	N/A	Vegetation	Stones
23544090	AT22-1	0.40 - 0.40	Dark Brown	Sand	Stones	None
23544110	AT22-2	1.00 - 1.00	Dark Brown	Stone/Soil	None	Stones
23544114	AT22-3	2.50 - 2.50	Dark Brown	N/A	Stones	None
23543974	AU20-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23543980	AU20-2	1.60 - 1.60	Dark Brown	Loamy Sand	Stones	None
23544054	AU21-1	0.40 - 0.40	Dark Brown	Sand	None	Stones
23544062	AU21-2	1.50 - 1.50	Dark Brown	N/A	Stones	None
23544119	AU22-1	0.50 - 0.50	Dark Brown	Sand	None	Stones
23544127	AU22-2	1.40 - 1.40	Dark Brown	N/A	Stones	None
23543984	AV20-1	0.50 - 0.50	Dark Brown	Loamy Sand	Brick	Stones
23544032	AV21-1	0.40 - 0.40	Dark Brown	Sandy Loam	Stones	None
23544041	AV21-2	1.60 - 1.60	Dark Brown	Sand	Vegetation	Stones
23543990	AW20-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23544006	AW20-2	2.00 - 2.00	Dark Brown	N/A	None	Stones
23544014	AW21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Vegetation
23544023	AW21-2	1.50 - 1.50	Dark Brown	Sand	None	Stones

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

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

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

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	13	10	10	8.1	20
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	74.1 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0504 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0126 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	0.0378 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	0.101 M
Soil Organic Matter (SOM)	<0.35 %	TM132		9.26 #	3.43 #	3.03 #	17.8 #	3.36 #	7.43 #
pH	1 pH Units	TM133		11.5 M	11.5 M	11.7 M	9.83 M	9.93 M	9.49 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.31 M	<1 M	3.93 M	1.16 M
Arsenic	<0.6 mg/kg	TM181		12.1 M	12.3 M	7.92 M	6.21 M	35.7 M	16.9 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.0685 M	0.108 M	1.55 M	<0.2 M	0.413 M
Chromium	<0.9 mg/kg	TM181		<9 M	21.7 M	16.9 M	49.5 M	<9 M	9.75 M
Copper	<1.4 mg/kg	TM181		15.8 M	22.4 M	38.1 M	30.7 M	20.2 M	25.4 M
Iron	<1000 mg/kg	TM181		171000 #	49700 #	35000 #	305000 #	374000 #	82600 #
Lead	<0.7 mg/kg	TM181		115 M	27.5 M	19.5 M	150 M	94.3 M	36.4 M
Manganese	<0.13 mg/kg	TM181		2040 M	1720 M	707 M	6190 M	7060 M	2000 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<0.14 M	<0.14 M	2.18 M	1.89 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		48.7 M	19.9 M	21.4 M	60.4 M	37.9 M	30.1 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<1 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		33.9 #	51 #	20.7 #	208 #	122 #	82 #
Zinc	<1.9 mg/kg	TM181		146 M	76 M	64.2 M	564 M	159 M	68.8 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						incomplete #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						incomplete #	
Additional Asbestos Components (Using TM048)		TM304						incomplete #	
Analysts Comments		TM304						incomplete	
Asbestos Quantification - Total - %	<0.001 %	TM304						incomplete #	

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	16	13	11	11	7.1
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		12.9 #	4.21 #	15.5 #	18.1 #	4.05 #	2.93 #
pH	1 pH Units	TM133		9.35 M	9.8 M	10 M	10.2 M	10.7 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		3.73 M	<1 M	1.43 M	9.2 M	<1 M	3.58 M
Arsenic	<0.6 mg/kg	TM181		16.7 M	14 M	12.6 M	12.6 M	8.74 M	14.3 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	<0.2 M	0.437 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		<9 M	<9 M	<9 M	74.3 M	<9 M	<9 M
Copper	<1.4 mg/kg	TM181		31.6 M	21.5 M	23.1 M	40.5 M	19.4 M	19.1 M
Iron	<1000 mg/kg	TM181		230000 #	185000 #	223000 #	211000 #	100000 #	159000 #
Lead	<0.7 mg/kg	TM181		160 M	110 M	98.9 M	117 M	30.8 M	100 M
Manganese	<0.13 mg/kg	TM181		4830 M	3160 M	6220 M	9100 M	3640 M	2900 M
Mercury	<0.14 mg/kg	TM181		2.56 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		58.4 M	35 M	57.9 M	71.6 M	54.7 M	36.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		88.4 #	72.2 #	77.7 #	176 #	48 #	51.2 #
Zinc	<1.9 mg/kg	TM181		483 M	347 M	237 M	314 M	165 M	172 M

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		6.6	11	9.8	11	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.76 #	0.426 #	>100 #	4.33 #	3.45	73.8 #
pH	1 pH Units	TM133		11.9 M	11.5 M	10.4 M	11.1 M	11.1	9.11 M
Cyanide, Total	<1 mg/kg	TM153		2.2 M	<1 M	<1 M	<1 M	1.63	<1 M
Arsenic	<0.6 mg/kg	TM181		11.4 M	33.2 M	<6 M	14 M	7.8	13 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.2 M	<0.2 M	<0.2 M	0.357	<0.2 M
Chromium	<0.9 mg/kg	TM181		17.3 M	<9 M	<9 M	<9 M	11.8	<9 M
Copper	<1.4 mg/kg	TM181		34.2 M	75.5 M	<14 M	17.6 M	15.2	22.7 M
Iron	<1000 mg/kg	TM181		44100 #	360000 #	42500 #	208000 #	87000	234000 #
Lead	<0.7 mg/kg	TM181		26.2 M	77.7 M	15.7 M	63.5 M	29.1	45.8 M
Manganese	<0.13 mg/kg	TM181		1690 M	5610 M	767 M	3230 M	2750	5060 M
Mercury	<0.14 mg/kg	TM181		0.164 M	<1.4 M	<1.4 M	<1.4 M	<1.4	<1.4 M
Nickel	<0.2 mg/kg	TM181		14.6 M	93.4 M	8.38 M	39.7 M	22.4	48.8 M
Selenium	<1 mg/kg	TM181		<1 #	<10 #	<10 #	<10 #	<10	<10 #
Vanadium	<0.2 mg/kg	TM181		28.9 #	62.9 #	12 #	55.2 #	54.6	181 #
Zinc	<1.9 mg/kg	TM181		129 M	194 M	45.6 M	144 M	116	194 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					incomplete #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					incomplete #		
Additional Asbestos Components (Using TM048)		TM304					incomplete #		
Analysts Comments		TM304					incomplete		
Asbestos Quantification - Total - %	<0.001 %	TM304					incomplete #		

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	4.3	10	8.8	7.3	7.3
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 #	<12	<12 M	<12 M	<12 M	<12
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01	<0.01 M	<0.01 M	<0.01 M	<0.01
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01	<0.01 M	0.011 M	<0.01 M	<0.01
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015	<0.015 M	<0.015 M	<0.015 M	<0.015
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035	<0.035 M	<0.035 M	<0.035 M	<0.035
Soil Organic Matter (SOM)	<0.35 %	TM132		<0.35 #	1.64	4.19 #	5.05 #	9.91 #	4.29
pH	1 pH Units	TM133		11.7 #	11.1	11.5 M	10.7 M	10.2 M	10.5
Cyanide, Total	<1 mg/kg	TM153		3.98 #	<1	<1 M	<1 M	<1 M	<1
Arsenic	<0.6 mg/kg	TM181		<6 #	<6	13 M	8.46 M	12.2 M	10.2
Cadmium	<0.02 mg/kg	TM181		<0.2 #	<0.2	<0.2 M	0.997 M	1.42 M	1.39
Chromium	<0.9 mg/kg	TM181		615 #	<9	10.7 M	55.3 M	40.7 M	<9
Copper	<1.4 mg/kg	TM181		16.5 #	<14	24.4 M	25.7 M	18.4 M	<14
Iron	<1000 mg/kg	TM181		188000 #	193000	113000 #	199000 #	281000 #	197000
Lead	<0.7 mg/kg	TM181		11 #	7.9	56.7 M	80.1 M	27.1 M	12.5
Manganese	<0.13 mg/kg	TM181		48600 #	3050	3420 M	4960 M	5850 M	3220
Mercury	<0.14 mg/kg	TM181		<1.4 #	<1.4	<1.4 M	<1.4 M	<1.4 M	<1.4
Nickel	<0.2 mg/kg	TM181		12.4 #	46.2	41.9 M	37.6 M	35.5 M	22.8
Selenium	<1 mg/kg	TM181		35.1 #	<10	<10 #	<10 #	<10 #	<10
Vanadium	<0.2 mg/kg	TM181		592 #	190	52.5 #	81.7 #	64 #	64.5
Zinc	<1.9 mg/kg	TM181		45.6 #	158	98.2 M	236 M	316 M	105
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					incomplete #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					incomplete #		
Additional Asbestos Components (Using TM048)		TM304					incomplete #		
Analysts Comments		TM304					incomplete		
Asbestos Quantification - Total - %	<0.001 %	TM304					incomplete #		

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	5.8	9.9	9.3	19	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12	<12 M	<12 M	25.8 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0116 M	<0.01 #	<0.01 M	<0.01 M	0.0124 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		30.5 #	8.05	3.76 #	11.4 #	5.07 #	7.78 #
pH	1 pH Units	TM133		11.4 M	10	11.2 M	10.5 M	10.9 M	9.12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1	<1 M	1.62 M	<1 M	2.98 M
Arsenic	<0.6 mg/kg	TM181		10.1 M	9.84	7.97 M	22.5 M	10.8 M	16 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2	1.63 M	<0.2 M	<0.2 M	0.636 M
Chromium	<0.9 mg/kg	TM181		213 M	35	91.4 M	<9 M	85 M	109 M
Copper	<1.4 mg/kg	TM181		<14 M	14.9	20.9 M	27.4 M	21.5 M	42.2 M
Iron	<1000 mg/kg	TM181		123000 #	96000	207000 #	325000 #	48000 #	144000 #
Lead	<0.7 mg/kg	TM181		55.3 M	46.5	145 M	89.5 M	31.8 M	296 M
Manganese	<0.13 mg/kg	TM181		2330 M	4160	8540 M	6800 M	6510 M	8550 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4	<1.4 M	1.56 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		33.1 M	18	25.3 M	68.5 M	18.7 M	42.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		37.3 #	126	88.5 #	89.1 #	142 #	173 #
Zinc	<1.9 mg/kg	TM181		107 M	168	641 M	272 M	116 M	897 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							incomplete #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							incomplete #
Additional Asbestos Components (Using TM048)		TM304							incomplete #
Analysts Comments		TM304							incomplete
Asbestos Quantification - Total - %	<0.001 %	TM304							incomplete #

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.7	7.4	20			
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12	<12 M	<12 M			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 #	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 #	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		1.17	6 #	1.79 #			
pH	1 pH Units	TM133		10.4	11.4 M	11.5 M			
Cyanide, Total	<1 mg/kg	TM153		<1	4.14 M	11.2 M			
Arsenic	<0.6 mg/kg	TM181		8.02	8.04 M	14.3 M			
Cadmium	<0.02 mg/kg	TM181		<0.2	0.642 M	<0.2 M			
Chromium	<0.9 mg/kg	TM181		<9	32.3 M	<9 M			
Copper	<1.4 mg/kg	TM181		15	22.5 M	15.7 M			
Iron	<1000 mg/kg	TM181		120000	141000 #	216000 #			
Lead	<0.7 mg/kg	TM181		19.7	29.4 M	42.2 M			
Manganese	<0.13 mg/kg	TM181		3070	2700 M	5540 M			
Mercury	<0.14 mg/kg	TM181		<1.4	<1.4 M	3.44 M			
Nickel	<0.2 mg/kg	TM181		27.5	52.9 M	29.7 M			
Selenium	<1 mg/kg	TM181		<10	<10 #	<10 #			
Vanadium	<0.2 mg/kg	TM181		52.9	31.1 #	61.1 #			
Zinc	<1.9 mg/kg	TM181		79.7	119 M	161 M			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.5	91.6	85.3	84.2	89.3	90.4
Acenaphthene-d10 % recovery**	%	TM218		85.5	87.9	82	87.1	88.4	86.2
Phenanthrene-d10 % recovery**	%	TM218		89.7	88.3	81.2	92.4	88.4	84
Chrysene-d12 % recovery**	%	TM218		86.3	113	73.6	88.5	89.4	73.4
Perylene-d12 % recovery**	%	TM218		72.1	120	71.9	72.3	86.1	67.3
Naphthalene	<9 µg/kg	TM218		328 M	274 M	267 M	267 M	26.3 M	77.4 M
Acenaphthylene	<12 µg/kg	TM218		122 M	179 M	<12 M	104 M	<12 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<40 M	<16 M	<8 M	14.4 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		140 M	57 M	13.8 M	78.8 M	13.8 M	<10 M
Phenanthrene	<15 µg/kg	TM218		590 M	490 M	92.9 M	760 M	58.3 M	93.1 M
Anthracene	<16 µg/kg	TM218		152 M	247 M	<16 M	196 M	<16 M	<16 M
Fluoranthene	<17 µg/kg	TM218		593 M	1170 M	54.3 M	1330 M	42.3 M	110 M
Pyrene	<15 µg/kg	TM218		447 M	838 M	41 M	1030 M	44.6 M	79.8 M
Benz(a)anthracene	<14 µg/kg	TM218		228 M	721 M	23.3 M	653 M	22.8 M	51.3 M
Chrysene	<10 µg/kg	TM218		268 M	611 M	29.8 M	622 M	30.6 M	52.2 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		294 M	1020 M	33.6 M	901 M	49.3 M	65.7 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		99.4 M	347 M	<14 M	286 M	<14 M	21.8 M
Benzo(a)pyrene	<15 µg/kg	TM218		166 M	667 M	<15 M	527 M	21.9 M	37 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		160 M	539 M	<18 M	485 M	24.2 M	30.6 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<115 M	119 M	<23 M	97.9 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<120 M	480 M	<24 M	411 M	<24 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3590	7760	556	7770	334	619

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.2	87.9	83.8	84.7	88.9	85.8
Acenaphthene-d10 % recovery**	%	TM218		87.1	85.7	82.9	82.8	87.1	90.8
Phenanthrene-d10 % recovery**	%	TM218		84.4	84.4	82.9	83.5	84.6	97.5
Chrysene-d12 % recovery**	%	TM218		78.6	87.2	91.2	77.4	75.5	93.6
Perylene-d12 % recovery**	%	TM218		74.7	84.1	88.3	73.5	72.4	86.2
Naphthalene	<9 µg/kg	TM218		145 M	24.6 M	125 M	209 M	26.3 M	163 M
Acenaphthylene	<12 µg/kg	TM218		43.8 M	<12 M	40.7 M	73.8 M	<12 M	32.4 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	11.6 M	34.4 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		27.2 M	<10 M	21.5 M	54.9 M	<10 M	26.3 M
Phenanthrene	<15 µg/kg	TM218		275 M	29.7 M	413 M	1790 M	53 M	186 M
Anthracene	<16 µg/kg	TM218		70.5 M	<16 M	94.6 M	398 M	<16 M	48.8 M
Fluoranthene	<17 µg/kg	TM218		399 M	30.7 M	849 M	3420 M	91 M	346 M
Pyrene	<15 µg/kg	TM218		313 M	26.1 M	635 M	2410 M	71.3 M	295 M
Benz(a)anthracene	<14 µg/kg	TM218		230 M	20.3 M	441 M	1400 M	41.6 M	185 M
Chrysene	<10 µg/kg	TM218		226 M	22.8 M	427 M	1290 M	45.6 M	199 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		454 M	31.6 M	740 M	1870 M	59.8 M	245 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		126 M	<14 M	246 M	538 M	19 M	85.7 M
Benzo(a)pyrene	<15 µg/kg	TM218		241 M	18.1 M	438 M	1260 M	37 M	137 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		232 M	<18 M	422 M	975 M	36.6 M	110 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		48.2 M	<23 M	87.1 M	218 M	<23 M	28.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		211 M	<24 M	392 M	933 M	32.8 M	114 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3040	204	5380	16900	514	2200

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.3	86.1	92.6	92.2	90.5	87.1
Acenaphthene-d10 % recovery**	%	TM218		88.1	83.3	89.3	87.7	86.3	86
Phenanthrene-d10 % recovery**	%	TM218		94.3	81.6	81	83.8	84.6	80.3
Chrysene-d12 % recovery**	%	TM218		93.8	72.9	56.6	76.2	79.9	66.6
Perylene-d12 % recovery**	%	TM218		88.2	70.3	44.6	79.2	79.6	53
Naphthalene	<9 µg/kg	TM218		65.7 M	44.1 M	74.5 M	141 M	24.7	71.9 M
Acenaphthylene	<12 µg/kg	TM218		15 M	<12 M	<12 M	59 M	<12	38.9 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	9.58 M	<8	10.8 M
Fluorene	<10 µg/kg	TM218		11.5 M	<10 M	26.8 M	39.3 M	<10	23.8 M
Phenanthrene	<15 µg/kg	TM218		85.3 M	53.1 M	244 M	324 M	17	298 M
Anthracene	<16 µg/kg	TM218		19 M	<16 M	38.1 M	82.5 M	<16	72.4 M
Fluoranthene	<17 µg/kg	TM218		192 M	52 M	72.1 M	540 M	<17	426 M
Pyrene	<15 µg/kg	TM218		161 M	43.7 M	84.1 M	389 M	<15	371 M
Benz(a)anthracene	<14 µg/kg	TM218		113 M	26.3 M	55.6 M	239 M	<14	246 M
Chrysene	<10 µg/kg	TM218		112 M	36.1 M	83.5 M	242 M	12.5	240 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		185 M	45.7 M	73.9 M	374 M	<15	283 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		63.1 M	<14 M	23.6 M	114 M	<14	110 M
Benzo(a)pyrene	<15 µg/kg	TM218		107 M	22.1 M	36.2 M	229 M	<15	241 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		90.5 M	23.1 M	23.2 M	199 M	<18	175 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	37.1 M	<23	49.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		90.4 M	<24 M	32 M	173 M	<24	210 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1310	346	867	3190	<118	2870

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.9	87.3	87.4	88.7	89.4	89.6
Acenaphthene-d10 % recovery**	%	TM218		86.4	88.3	85.5	89.5	87.4	86.4
Phenanthrene-d10 % recovery**	%	TM218		89.3	91.5	84.2	93.1	89	85.3
Chrysene-d12 % recovery**	%	TM218		84.7	88.5	76	90.7	78.2	78.6
Perylene-d12 % recovery**	%	TM218		84	82.9	73.6	82.1	70.9	76
Naphthalene	<9 µg/kg	TM218		14.1 #	145	40.8 M	28.4 M	63 M	55.3
Acenaphthylene	<12 µg/kg	TM218		<12 #	<12	27.2 M	<12 M	33.7 M	<12
Acenaphthene	<8 µg/kg	TM218		<8 #	9.7	<8 M	<8 M	9.75 M	<8
Fluorene	<10 µg/kg	TM218		<10 #	10.5	<10 M	<10 M	16.1 M	11.2
Phenanthrene	<15 µg/kg	TM218		92.1 #	23.7	112 M	63.9 M	180 M	78.6
Anthracene	<16 µg/kg	TM218		<16 #	<16	30 M	<16 M	43.9 M	<16
Fluoranthene	<17 µg/kg	TM218		117 #	20.3	197 M	84.7 M	307 M	98.3
Pyrene	<15 µg/kg	TM218		189 #	17.9	183 M	70.4 M	253 M	77
Benz(a)anthracene	<14 µg/kg	TM218		116 #	<14	121 M	47.8 M	169 M	47.5
Chrysene	<10 µg/kg	TM218		141 #	<10	154 M	51.7 M	174 M	50.7
Benzo(b)fluoranthene	<15 µg/kg	TM218		313 #	<15	163 M	81.5 M	303 M	53.4
Benzo(k)fluoranthene	<14 µg/kg	TM218		114 #	<14	69.8 M	27.3 M	87.9 M	21.1
Benzo(a)pyrene	<15 µg/kg	TM218		230 #	<15	147 M	43.4 M	164 M	41
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		289 #	<18	146 M	40.4 M	147 M	37.5
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		60.5 #	<23	28 M	<23 M	28.7 M	<23
Benzo(g,h,i)perylene	<24 µg/kg	TM218		306 #	<24	153 M	44.4 M	136 M	39
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1980	227	1570	584	2110	611

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.5	86.8	88.7	89.7	86.5	85.1
Acenaphthene-d10 % recovery**	%	TM218		81.5	85.9	87.6	85.4	84.4	86.2
Phenanthrene-d10 % recovery**	%	TM218		76.5	82.7	85.2	85.4	83	91.2
Chrysene-d12 % recovery**	%	TM218		73.5	73.1	79	104	75	86.4
Perylene-d12 % recovery**	%	TM218		72	70.8	74.4	100	72.6	76.5
Naphthalene	<9 µg/kg	TM218		<450 M	43.2	53.7 M	64.5 M	30 M	79.6 M
Acenaphthylene	<12 µg/kg	TM218		<600 M	<12	38 M	31.4 M	<12 M	113 M
Acenaphthene	<8 µg/kg	TM218		<400 M	<8	9.29 M	<16 M	<8 M	<40 M
Fluorene	<10 µg/kg	TM218		<500 M	<10	17.6 M	<20 M	<10 M	168 M
Phenanthrene	<15 µg/kg	TM218		<750 M	62	194 M	123 M	102 M	1430 M
Anthracene	<16 µg/kg	TM218		<800 M	<16	43.4 M	<32 M	<16 M	295 M
Fluoranthene	<17 µg/kg	TM218		<850 M	49.7	385 M	225 M	149 M	2320 M
Pyrene	<15 µg/kg	TM218		<750 M	40.2	331 M	194 M	116 M	1630 M
Benz(a)anthracene	<14 µg/kg	TM218		<700 M	24.9	212 M	150 M	69.2 M	883 M
Chrysene	<10 µg/kg	TM218		<500 M	36.5	249 M	162 M	84.5 M	637 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<750 M	46.5	288 M	297 M	110 M	1120 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<700 M	<14	120 M	94.2 M	38.5 M	422 M
Benzo(a)pyrene	<15 µg/kg	TM218		<750 M	21.8	240 M	143 M	55.8 M	657 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<900 M	22.2	228 M	171 M	47.4 M	528 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<1150 M	<23	46.6 M	<46 M	<23 M	<115 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<1200 M	<24	227 M	160 M	48.9 M	481 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<5900	347	2680	1810	851	10800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86.5	88	93.4			
Acenaphthene-d10 % recovery**	%	TM218		88.2	87	90.3			
Phenanthrene-d10 % recovery**	%	TM218		88.8	85	89.6			
Chrysene-d12 % recovery**	%	TM218		91.7	79.5	85			
Perylene-d12 % recovery**	%	TM218		94	72	87.5			
Naphthalene	<9 µg/kg	TM218		157 #	<450 M	1010 M			
Acenaphthylene	<12 µg/kg	TM218		<12 #	<600 M	927 M			
Acenaphthene	<8 µg/kg	TM218		<8 #	<400 M	101 M			
Fluorene	<10 µg/kg	TM218		11 #	<500 M	458 M			
Phenanthrene	<15 µg/kg	TM218		47.5 #	<750 M	1250 M			
Anthracene	<16 µg/kg	TM218		<16 #	<800 M	457 M			
Fluoranthene	<17 µg/kg	TM218		44.6 #	<850 M	2810 M			
Pyrene	<15 µg/kg	TM218		37.9 #	<750 M	2750 M			
Benz(a)anthracene	<14 µg/kg	TM218		26.9 #	<700 M	2040 M			
Chrysene	<10 µg/kg	TM218		26.4 #	<500 M	2030 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		44.6 #	<750 M	4200 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 #	<700 M	1180 M			
Benzo(a)pyrene	<15 µg/kg	TM218		22.1 #	<750 M	2590 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		25 #	<900 M	2400 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 #	<1150 M	469 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 #	<1200 M	2010 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		443	<5900	26700			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		91.1	94.1	112	104	100	89.1
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	11.4	<10	<10	<10	11.3
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	68.4	31.4	<10	<10	44.1
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	833	175	<10	<10	208
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1660	1090
Aliphatics >C16-C21	<1000 µg/kg	TM414		15600	2510	2640	6160	17800	2540
Aliphatics >C21-C35	<1000 µg/kg	TM414		106000	19900	19300	15700	84400	9790
Aliphatics >C35-C44	<1000 µg/kg	TM414		65600	13400	7480	2840	37000	1680
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		189000	36000	29500	25100	141000	15300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		231000	48100	36600	45200	156000	384000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	26.2	16.8	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	555	116	<10	<10	139
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	9660
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1990	<1000	<1000	2350	2200	117000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		37000	8680	5040	16100	11400	217000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2770	1810	<1000	<1000	1000	24500
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	4560
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		42600	12100	7070	20100	15300	368000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		231000	49600	36900	45200	156000	384000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	913	206	<50	<50	263
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	581	133	<50	<50	139
GRO >C5-C10	<20 µg/kg	TM089		<20	1490	339	<20	<20	402

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78.5	104	108	99.2	87.5	86.1
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	15.5	12.7	22.4	13.4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	28.6	20.7	29.1	22.4	10.8
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	2470	4040
Aliphatics >C16-C21	<1000 µg/kg	TM414		7110	1110	4980	10500	4480	95300
Aliphatics >C21-C35	<1000 µg/kg	TM414		11000	5210	22100	157000	17300	171000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	6460	41400	1300	61400
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		19200	7160	34100	211000	25500	332000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		46800	12400	70500	288000	53000	361000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	19	13.8	20.2	15.7	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1390	<1000	1860	7300	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		20400	3940	32500	67500	25800	27300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		5600	<1000	1880	2560	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		27600	5220	36400	77700	27400	29300
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		46800	12400	70600	288000	53000	361000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	51.5	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	51.5	<20	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		105	84.5	68.8 4	84.3	88.4	55.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	11.1	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	17.8	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	1710	<1000	7390	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		9070	2940	3660	1140	7000	1460
Aliphatics >C21-C35	<1000 µg/kg	TM414		30700	60800	18200	18200	13600	6260
Aliphatics >C35-C44	<1000 µg/kg	TM414		21600	33300	2750	7650	6570	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		62000	97000	26500	27000	34500	8130
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		74900	114000	49100	42000	46200	29000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	12.2	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	1380	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	5680	2130	<1000	4460
Aromatics > EC21-EC35	<1000 µg/kg	TM414		11400	15200	14400	11800	9900	14900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1130	<1000	<1000	1350	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		12900	16800	22700	15000	11600	20900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		74900	114000	49100	42000	46200	29000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20 4

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		110	94.8	83.8	71.5	73.2	91.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	29.3	<10	11	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		14.7	57.5	<10	20.8	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		3830	2110	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		13200	4930	2640	2260	3200	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		9790	8620	31400	30800	16600	5530
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	19400	23900	4250	1220
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		26800	15700	53400	57100	24100	7490
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		28700	21400	65600	75500	43600	17700
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		10.2	38.7	<10	13.2	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	2850	10600	16500	17200	8640
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1260	1640	1190
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	5670	12200	18300	19500	10200
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		26800	21500	65600	75500	43600	17700
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	86.7	<50	31.8	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	86.7	<20	31.8	<20	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		106	95.5	93.5	70.3	107	86.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	24.8	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	18.9	<10	73.2	14.3
Aliphatics >C8-C10	<10 µg/kg	TM089		17.4	<10	33.3	<10	95.5	22.6
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1160	<1000	<1000	<1000	3830	3200
Aliphatics >C16-C21	<1000 µg/kg	TM414		26400	1240	5880	2960	7570	23400
Aliphatics >C21-C35	<1000 µg/kg	TM414		221000	6590	56000	43000	22300	33500
Aliphatics >C35-C44	<1000 µg/kg	TM414		41300	<1000	13600	14900	4700	8110
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		290000	8050	75800	61000	38700	68700
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		335000	11600	94900	76200	45300	123000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		11.6	<10	22.2	<10	64.5	15.5
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	2550
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	1160	<1000	<1000	3070
Aromatics > EC21-EC35	<1000 µg/kg	TM414		42000	2010	16500	13100	4840	39100
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2260	<1000	1220	1380	<1000	9860
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	3240
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		45200	<5000	19100	15200	6570	54600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		335000	<10000	94900	76200	45500	123000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	52.2	<50	193	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	64.5	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	52.2	<20	258	<20

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		90.3	83.1	100			
Aliphatics >C5-C6	<10 µg/kg	TM089		3.18	<10	16.4			
Aliphatics >C6-C8	<10 µg/kg	TM089		10.6	<10	88.2			
Aliphatics >C8-C10	<10 µg/kg	TM089		23.3	<10	186			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	2310	55400			
Aliphatics >C16-C21	<1000 µg/kg	TM414		3260	21400	193000			
Aliphatics >C21-C35	<1000 µg/kg	TM414		56100	14700	16800			
Aliphatics >C35-C44	<1000 µg/kg	TM414		27600	2410	2190			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		87100	40900	267000			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		111000	87700	427000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10			
Aromatics >EC8-EC10	<10 µg/kg	TM089		15.9	<10	125			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	1950			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1810	31700			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	5590	80300			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		21700	27600	40600			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1440	11300	4640			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1710	<1000			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23500	46800	159000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		111000	87700	427000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	291			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	125			
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	416			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3
			Depth (m)	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23543943	23543949	23543955	23544156	23544165	23543938
			AGS Reference						
Dibromofluoromethane**	%	TM116		107	106	108	101	105	111
Toluene-d8**	%	TM116		96.9	97.7	96.1	94.5	97	95.4
4-Bromofluorobenzene**	%	TM116		94.3	91	91.2	83.6	92.4	87.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ21-1	AQ21-2	AR21-1	AR21-2	AR21-3	AS20-1
			Depth (m)	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20	2.00 - 2.00	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021	11/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544143	23544149	23544096	23544133	23544137	23543930
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	115	108	105	111	108
Toluene-d8**	%	TM116		98.2	99.6	96.6	96.5	96.8	95.4
4-Bromofluorobenzene**	%	TM116		95.5	97.7	93.2	86.3	93.7	93.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1
			Depth (m)	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544000	23543960	23543966	23544071	23544080	23544090
			AGS Reference						
Dibromofluoromethane**	%	TM116		110	109	110	108	108	106
Toluene-d8**	%	TM116		97.7	95.9	94	97.3	97.8	100
4-Bromofluorobenzene**	%	TM116		96.1	90.6	86.7	96.4	95.1	88.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 #	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 #	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 #	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 #	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 #	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 #	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AT22-2	AT22-3	AU20-1	AU20-2	AU21-1	AU21-2
			Depth (m)	1.00 - 1.00	2.50 - 2.50	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544110	23544114	23543974	23543980	23544054	23544062
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	116	108	110	111	108
Toluene-d8**	%	TM116		98.9	97.3	97.4	96.2	96.2	97.3
4-Bromofluorobenzene**	%	TM116		100	95.8	89.5	88.6	89.9	90.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 #	<200 #	<200 M	<200 M	<200 M	<200
Benzene	<9 µg/kg	TM116		<180 #	<180 #	<180 M	<180 M	<180 M	<180
Toluene	<7 µg/kg	TM116		<140 #	<140 #	<140 M	<140 M	<140 M	<140
Ethylbenzene	<4 µg/kg	TM116		<80 #	<80 #	<80 M	<80 M	<80 M	<80
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200
o-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 M	<200 M	<200 M	<200
Naphthalene	<13 µg/kg	TM116		<260 #	<260 #	<260 M	<260 M	<260 M	<260
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			SDG Ref	210114-154	210114-154	210114-154	210114-154	210114-154	210114-154
			Lab Sample No.(s)	23544119	23544127	23543984	23544032	23544041	23543990
			AGS Reference						
Dibromofluoromethane**	%	TM116		109	113	106	106	104	113
Toluene-d8**	%	TM116		95.5	97.5	96.1	98	96	97
4-Bromofluorobenzene**	%	TM116		88.8	97	93.1	91.7	92.1	90.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW20-2	AW21-1	AW21-2			
			Depth (m)	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	12/01/2021	12/01/2021	12/01/2021			
			Sample Time	.	.	.			
			Date Received	13/01/2021	13/01/2021	13/01/2021			
			SDG Ref	210114-154	210114-154	210114-154			
			Lab Sample No.(s)	23544006	23544014	23544023			
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	109	105			
Toluene-d8**	%	TM116		96.8	96.4	97.3			
4-Bromofluorobenzene**	%	TM116		94.7	91.1	95.1			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200	<200 M	<200 M			
Benzene	<9 µg/kg	TM116		<180	<180 M	<180 M			
Toluene	<7 µg/kg	TM116		<140	<140 M	<140 M			
Ethylbenzene	<4 µg/kg	TM116		<80	<80 M	<80 M			
p/m-Xylene	<10 µg/kg	TM116		<200	<200 #	<200 #			
o-Xylene	<10 µg/kg	TM116		<200	<200 M	<200 M			
Naphthalene	<13 µg/kg	TM116		<260	<260 M	<260 M			
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4			
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800			

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO21-1 0.90 - 0.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543943 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO21-3 2.50 - 2.50 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543955 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AP21-2 1.90 - 1.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544165 TM048	19/01/2021	Paul Poynton	ACM debris typical of asbestos bituminous product in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ21-2 1.90 - 1.90 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544149 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AR21-1 0.30 - 0.30 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544096 TM048	21/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AR21-3 2.00 - 2.00 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544137 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AS20-1 0.40 - 0.40 SOLID 11/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543930 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT20-2 1.00 - 1.00 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543966 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT21-1 0.30 - 0.30 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544071 TM048	21/01/2021	Paul Poynton	Loose fibres in soil	Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT22-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544090 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT22-3 2.50 - 2.50 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544114 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU20-2 1.60 - 1.60 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543980 TM048	20/01/2021	Paul Poynton	Loose fibres and ACM debris typical of asbestos bituminous product in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU21-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544054 TM048	19/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU22-2 1.40 - 1.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544127 TM048	21/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV21-1 0.40 - 0.40 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544032 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AW20-1 0.30 - 0.30 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23543990 TM048	20/01/2021	James Richards	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AW21-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 13/01/2021 05:00:00 210114-154 23544014 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23543943	23543949	23543955	23544156	23544165	23543938	23544143	23544149	23544096	23544133
Customer Sample Ref.	AO21-1	AO21-2	AO21-3	AP21-1	AP21-2	AP21-3	AQ21-1	AQ21-2	AR21-1	AR21-2
AGS Ref.										
Depth	0.90 - 0.90	1.60 - 1.60	2.50 - 2.50	0.30 - 0.30	1.90 - 1.90	2.40 - 2.40	0.40 - 0.40	1.90 - 1.90	0.30 - 0.30	1.20 - 1.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021		21-Jan-2021		19-Jan-2021			20-Jan-2021	21-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	18-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
Metals in solid samples by OES	20-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	18-Jan-2021	19-Jan-2021	20-Jan-2021	18-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021
pH	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021
VOC MS (S)	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021

Lab Sample No(s)	23544137	23543930	23544000	23543960	23543966	23544071	23544080	23544090	23544110	23544114
Customer Sample Ref.	AR21-3	AS20-1	AS20-2	AT20-1	AT20-2	AT21-1	AT21-2	AT22-1	AT22-2	AT22-3
AGS Ref.										
Depth	2.00 - 2.00	0.40 - 0.40	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00	0.30 - 0.30	1.90 - 1.90	0.40 - 0.40	1.00 - 1.00	2.50 - 2.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021	20-Jan-2021			20-Jan-2021	21-Jan-2021		20-Jan-2021		20-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	18-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021
Metals in solid samples by OES	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
TPH CWG GC (S)	22-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	18-Jan-2021

Lab Sample No(s)	23543974	23543980	23544054	23544062	23544119	23544127	23543984	23544032	23544041	23543990
Customer Sample Ref.	AU20-1	AU20-2	AU21-1	AU21-2	AU22-1	AU22-2	AV20-1	AV21-1	AV21-2	AW20-1
AGS Ref.										
Depth	0.40 - 0.40	1.60 - 1.60	0.40 - 0.40	1.50 - 1.50	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.40 - 0.40	1.60 - 1.60	0.30 - 0.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	19-Jan-2021			21-Jan-2021		20-Jan-2021		20-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	20-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	22-Jan-2021	20-Jan-2021	18-Jan-2021	20-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
Metals in solid samples by OES	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	22-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021

PRELIMINARY/INTERIM REPORT

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Lab Sample No(s)	23544006	23544014	23544023
Customer Sample Ref.	AW20-2	AW21-1	AW21-2
AGS Ref.			
Depth	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	19-Jan-2021	20-Jan-2021	19-Jan-2021
EPH CWG GC (S)	19-Jan-2021	20-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	19-Jan-2021	20-Jan-2021	19-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	20-Jan-2021	21-Jan-2021	19-Jan-2021
pH	15-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	20-Jan-2021
Sample description	15-Jan-2021	18-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	19-Jan-2021
VOC MS (S)	19-Jan-2021	20-Jan-2021	18-Jan-2021

SDG:	210114-154	**Client Reference:**	P18-669	**Report Number:**	584152
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Rodgers Leask
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BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	27 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210114-156
Your Reference:	P18-669
Location:	Llanwern
Report No:	584521

This report has been revised and directly supersedes 584114 in its entirety.

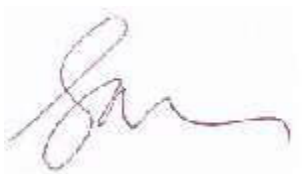
We received 26 samples on Thursday January 14, 2021 and 26 of these samples were scheduled for analysis which was completed on Wednesday January 27, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23544315	AR29-1		1.20 - 1.20	13/01/2021
23544309	AS29-1		1.00 - 1.00	13/01/2021
23544291	AT29-1		0.50 - 0.50	13/01/2021
23544302	AT29-2		1.10 - 1.10	13/01/2021
23544336	AU23-1		0.50 - 0.50	12/01/2021
23544341	AU23-2		1.40 - 1.40	12/01/2021
23544284	AU28-1		0.50 - 0.50	13/01/2021
23544150	AV22-1		0.50 - 0.50	12/01/2021
23544263	AV22-2		1.50 - 1.50	12/01/2021
23544346	AV23-1		0.50 - 0.50	12/01/2021
23544351	AV23-2		1.60 - 1.60	12/01/2021
23544251	AV28-1		0.30 - 0.30	13/01/2021
23544270	AV28-2		1.20 - 1.20	13/01/2021
23544277	AV28-3		2.20 - 2.20	13/01/2021
23544237	AV29-1		0.80 - 0.80	13/01/2021
23544246	AV29-2		1.70 - 1.70	13/01/2021
23544320	AW22-1		0.50 - 0.50	12/01/2021
23544325	AW22-2		1.30 - 1.30	12/01/2021
23544330	AW22-3		2.40 - 2.40	12/01/2021
23544170	AW23-1		0.60 - 0.60	12/01/2021
23544178	AW23-2		1.70 - 1.70	12/01/2021
23544190	AW26-1		0.50 - 0.50	12/01/2021
23544196	AW28-1		0.40 - 0.40	13/01/2021
23544202	AW28-2		1.40 - 1.40	13/01/2021
23544215	AW29-1		0.60 - 0.60	13/01/2021
23544221	AW29-2		1.30 - 1.30	13/01/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23544315		23544309		23544291		23544302		23544336		23544341		23544284		23544150		23544263		23544346
Customer Sample Reference			AR29-1		AS29-1		AT29-1		AT29-2		AU23-1		AU23-2		AU28-1		AV22-1		AV22-2		AV23-1
AGS Reference																					
Depth (m)			1.20 - 1.20		1.00 - 1.00		0.50 - 0.50		1.10 - 1.10		0.50 - 0.50		1.40 - 1.40		0.50 - 0.50		0.50 - 0.50		1.50 - 1.50		0.50 - 0.50
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
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: 26	X		X		X		X		X		X		X		X		X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 13			X		X						X				X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2											X								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
PAH by GCMS	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
pH	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
Sample description	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
Total Organic Carbon	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X		X		X		X		X
VOC MS (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		X		X		X		X	

23544178	AW23-2		1.70 - 1.70	250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544170	AW23-1		0.60 - 0.60	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x		
23544330	AW22-3		2.40 - 2.40	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544325	AW22-2		1.30 - 1.30	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x		
23544320	AW22-1		0.50 - 0.50	250g Amber Jar (ALE210)	S	x	x		x	x	x	x	x	x	x	x	x	x	x	x
23544246	AV29-2		1.70 - 1.70	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x		
23544237	AV29-1		0.80 - 0.80	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544277	AV28-3		2.20 - 2.20	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544270	AV28-2		1.20 - 1.20	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x		
23544251	AV28-1		0.30 - 0.30	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544351	AV23-2		1.60 - 1.60	60g VOC (ALE215)	S						x									x
				250g Amber Jar (ALE210)	S	x	x		x	x		x	x	x	x	x	x	x		
23544346	AV23-1		0.50 - 0.50	60g VOC (ALE215)	S						x									x

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

X Test

N No Determination Possible

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

Lab Sample No(s)			23544178		23544190		23544196		23544202		23544215		23544221	
Customer Sample Reference			AW23-2		AW26-1		AW28-1		AW28-2		AW29-1		AW29-2	
AGS Reference														
Depth (m)			1.70 - 1.70		0.50 - 0.50		0.40 - 0.40		1.40 - 1.40		0.60 - 0.60		1.30 - 1.30	
Container			60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	
Sample Type			S	S	S	S	S	S	S	S	S	S	S	
Ammonium Soil by Titration	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 13				X				X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2								X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 26		X		X		X		X		X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 26		X		X		X		X		X		
PAH by GCMS	All	NDPs: 0 Tests: 26		X		X		X		X		X		
pH	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Sample description	All	NDPs: 0 Tests: 26		X		X		X		X		X		
Total Organic Carbon	All	NDPs: 0 Tests: 26		X		X		X		X		X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 26		X		X		X		X		X		
VOC MS (S)	All	NDPs: 0 Tests: 26	X		X		X		X		X		X	

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23544315	AR29-1	1.20 - 1.20	Black	Sand	Stones	None
23544309	AS29-1	1.00 - 1.00	Black	Sand	Stones	None
23544291	AT29-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23544302	AT29-2	1.10 - 1.10	Black	Loamy Sand	Stones	None
23544336	AU23-1	0.50 - 0.50	Dark Brown	Sandy Clay Loam	Stones	None
23544341	AU23-2	1.40 - 1.40	Dark Brown	Sandy Loam	Stones	N/A
23544284	AU28-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23544150	AV22-1	0.50 - 0.50	Black	Loamy Sand	Stones	None
23544263	AV22-2	1.50 - 1.50	Dark Brown	Sandy Loam	Stones	Concrete/Aggregate
23544346	AV23-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23544351	AV23-2	1.60 - 1.60	Light Brown	Sand	Stones	None
23544251	AV28-1	0.30 - 0.30	Dark Brown	Silty Sand	Stones	None
23544270	AV28-2	1.20 - 1.20	Black	Loamy Sand	Stones	None
23544277	AV28-3	2.20 - 2.20	Black	Loamy Sand	Stones	None
23544237	AV29-1	0.80 - 0.80	Dark Brown	Loamy Sand	Stones	None
23544246	AV29-2	1.70 - 1.70	Black	Stone/Soil	None	None
23544320	AW22-1	0.50 - 0.50	Black	Sandy Loam	Stones	None
23544325	AW22-2	1.30 - 1.30	Black	Loamy Sand	Stones	None
23544330	AW22-3	2.40 - 2.40	Grey	Rubble/Soil	Stones	None
23544170	AW23-1	0.60 - 0.60	Dark Brown	Sand	Stones	None
23544178	AW23-2	1.70 - 1.70	Dark Brown	Sand	Stones	N/A
23544190	AW26-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23544196	AW28-1	0.40 - 0.40	Black	Loamy Sand	Stones	None
23544202	AW28-2	1.40 - 1.40	Black	Loamy Sand	Stones	None
23544215	AW29-1	0.60 - 0.60	Black	Loamy Sand	Stones	None
23544221	AW29-2	1.30 - 1.30	Black	Loamy Sand	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	11	12	24	20	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	28.7 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		61.9 #	12.8 #	22.1 #	98.8 #	4.98 #	4.47 #
pH	1 pH Units	TM133		11.7 M	11.5 M	10.8 M	10.4 M	9.06 M	10.8 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		5.37 M	6.29 M	4.22 M	5.02 M	13.6 M	6.17 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.22 M	0.147 M	<0.02 M	0.839 M	0.309 M
Chromium	<0.9 mg/kg	TM181		307 M	222 M	25.6 M	8.05 M	226 M	77.9 M
Copper	<1.4 mg/kg	TM181		19.3 M	<14 M	6.17 M	17.8 M	24.1 M	<14 M
Iron	<1000 mg/kg	TM181		64500 #	102000 #	32600 #	23900 #	87800 #	55000 #
Lead	<0.7 mg/kg	TM181		9.84 M	13.1 M	22.5 M	16.2 M	100 M	109 M
Manganese	<0.13 mg/kg	TM181		19000 M	19600 M	5800 M	1800 M	12600 M	6930 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M	<0.14 M	<0.14 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		7.08 M	10.1 M	4.84 M	8.34 M	28.4 M	12.3 M
Selenium	<1 mg/kg	TM181		10.1 #	11.5 #	4.19 #	1.3 #	10.7 #	<10 #
Vanadium	<0.2 mg/kg	TM181		895 #	480 #	51.5 #	26.9 #	236 #	140 #
Zinc	<1.9 mg/kg	TM181		35.5 M	522 M	49.7 M	46.3 M	476 M	265 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							<0.001 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							<0.001 #
Additional Asbestos Components (Using TM048)		TM304							None #
Analysts Comments		TM304							0
Asbestos Quantification - Total - %	<0.001 %	TM304							<0.001 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	9	17	11	6.8	9.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	30.1 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0121 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		3.28 #	17.4 #	7.52 #	1.01 #	0.441 #	26 #
pH	1 pH Units	TM133		9.07 M	10.4 M	11.8 M	9.67 M	10.9 M	9.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.54 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.86 M	9.2 M	12.4 M	6.51 M	2.8 M	7.62 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.2 M	<0.2 M	0.873 M	0.24 M	0.802 M
Chromium	<0.9 mg/kg	TM181		26.5 M	<9 M	<9 M	23.7 M	57.2 M	219 M
Copper	<1.4 mg/kg	TM181		15.2 M	<14 M	15 M	10.2 M	3.15 M	19.1 M
Iron	<1000 mg/kg	TM181		53200 #	238000 #	118000 #	22000 #	6400 #	208000 #
Lead	<0.7 mg/kg	TM181		37.6 M	44.6 M	33.5 M	19.5 M	<0.7 M	29.1 M
Manganese	<0.13 mg/kg	TM181		4440 M	3470 M	3140 M	2090 M	6650 M	8970 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<1.4 M	<1.4 M	<0.14 M	<0.14 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		14.6 M	53.7 M	30.9 M	13 M	1.37 M	29.5 M
Selenium	<1 mg/kg	TM181		1.61 #	<10 #	<10 #	1.15 #	3.97 #	<10 #
Vanadium	<0.2 mg/kg	TM181		60.3 #	56.6 #	54.5 #	38 #	110 #	146 #
Zinc	<1.9 mg/kg	TM181		136 M	164 M	110 M	90.6 M	27.6 M	180 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	21	15	12	11	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	127 #	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 #	0.0113 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 #	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 #	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49.1 #	44 #	11.5 #	1.45 #	23.4 #	10.9 #
pH	1 pH Units	TM133		11.5 M	11.3 M	11.3 M	8.31 #	10.2 M	10.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 #	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		9.8 M	11.7 M	17.2 M	4.66 #	8.42 M	19 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	4.82 M	0.297 #	0.132 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		<9 M	<9 M	<9 M	<9 #	138 M	<9 M
Copper	<1.4 mg/kg	TM181		19.6 M	17.8 M	43.9 M	14.3 #	15.3 M	41.3 M
Iron	<1000 mg/kg	TM181		143000 #	146000 #	321000 #	14800 #	94200 #	264000 #
Lead	<0.7 mg/kg	TM181		51.4 M	74 M	1400 M	31.7 #	147 M	41.5 M
Manganese	<0.13 mg/kg	TM181		4270 M	4290 M	10900 M	2880 #	10400 M	4700 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<0.14 #	0.239 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		20.7 M	21.3 M	41.6 M	7.14 #	18.5 M	41.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	6.48 #	3.64 #	<10 #
Vanadium	<0.2 mg/kg	TM181		64.6 #	69 #	156 #	22.1 #	311 #	83.2 #
Zinc	<1.9 mg/kg	TM181		128 M	170 M	2780 M	83 #	449 M	116 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		5.8	10	8.2	13	9.9	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 #	<12 M	39.6 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.0424 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0424 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		2.67 #	1.01 #	1.91 #	4.34 #	14.1 #	7.12 #
pH	1 pH Units	TM133		10.6 #	11.3 M	10.3 M	9.52 M	9.57 M	11.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 #	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 #	1.9 M	6.69 M	11 M	7.89 M	6.03 M
Cadmium	<0.02 mg/kg	TM181		<0.2 #	<0.02 M	0.742 M	<0.2 M	0.249 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		101 #	3.79 M	97.2 M	399 M	294 M	399 M
Copper	<1.4 mg/kg	TM181		<14 #	<1.4 M	17.6 M	40.3 M	<14 M	<14 M
Iron	<1000 mg/kg	TM181		42100 #	10800 #	36600 #	64300 #	175000 #	168000 #
Lead	<0.7 mg/kg	TM181		21.3 #	<0.7 M	16.1 M	49.9 M	166 M	56.1 M
Manganese	<0.13 mg/kg	TM181		4710 #	3970 M	2020 M	18900 M	19100 M	30700 M
Mercury	<0.14 mg/kg	TM181		<1.4 #	<1.4 M	0.297 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		13.5 #	1.21 M	16.7 M	26.4 M	14 M	11.2 M
Selenium	<1 mg/kg	TM181		<10 #	2.23 #	2.32 #	16.7 #	12.6 #	23.6 #
Vanadium	<0.2 mg/kg	TM181		202 #	14.8 #	102 #	622 #	227 #	506 #
Zinc	<1.9 mg/kg	TM181		43.6 #	21.1 M	95.1 M	205 M	427 M	182 M

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	18				
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M				
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M				
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M				
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M				
Soil Organic Matter (SOM)	<0.35 %	TM132		24.7 #	19.7 #				
pH	1 pH Units	TM133		9.1 M	11.2 M				
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M				
Arsenic	<0.6 mg/kg	TM181		15.6 M	17.3 M				
Cadmium	<0.02 mg/kg	TM181		1.18 M	3.89 M				
Chromium	<0.9 mg/kg	TM181		<9 M	65.1 M				
Copper	<1.4 mg/kg	TM181		25.7 M	34.1 M				
Iron	<1000 mg/kg	TM181		222000 #	291000 #				
Lead	<0.7 mg/kg	TM181		242 M	1100 M				
Manganese	<0.13 mg/kg	TM181		6090 M	12000 M				
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M				
Nickel	<0.2 mg/kg	TM181		29.7 M	32.9 M				
Selenium	<1 mg/kg	TM181		<10 #	<10 #				
Vanadium	<0.2 mg/kg	TM181		78.6 #	168 #				
Zinc	<1.9 mg/kg	TM181		718 M	2990 M				
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		N/A					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		89.7	86.7	82.6	88.9	80.1	89.5
Acenaphthene-d10 % recovery**	%	TM218		86.2	87.6	81.7	87.6	82	88.1
Phenanthrene-d10 % recovery**	%	TM218		78	88.1	79.4	86.1	87.3	87.6
Chrysene-d12 % recovery**	%	TM218		57	79.7	74	69.9	85.9	90.4
Perylene-d12 % recovery**	%	TM218		47.7	79.9	72.4	59.5	74.2	86.3
Naphthalene	<9 µg/kg	TM218		73.9 M	39 M	<45 M	76.7 M	84.1 M	205 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<60 M	<12 M	51.3 M	<12 M
Acenaphthene	<8 µg/kg	TM218		12.3 M	<8 M	<40 M	<8 M	13 M	17.3 M
Fluorene	<10 µg/kg	TM218		22.1 M	12.2 M	<50 M	32.2 M	36.4 M	21.8 M
Phenanthrene	<15 µg/kg	TM218		238 M	107 M	<75 M	256 M	270 M	117 M
Anthracene	<16 µg/kg	TM218		53.3 M	23.1 M	<80 M	39.1 M	83 M	19.6 M
Fluoranthene	<17 µg/kg	TM218		310 M	165 M	164 M	170 M	542 M	157 M
Pyrene	<15 µg/kg	TM218		261 M	149 M	258 M	322 M	424 M	126 M
Benz(a)anthracene	<14 µg/kg	TM218		299 M	119 M	106 M	128 M	262 M	106 M
Chrysene	<10 µg/kg	TM218		321 M	126 M	153 M	194 M	274 M	126 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		357 M	220 M	209 M	187 M	366 M	183 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		134 M	66.9 M	<70 M	47.6 M	110 M	66.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		292 M	135 M	98.4 M	94.7 M	217 M	99.9 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		189 M	109 M	<90 M	71.6 M	175 M	94.7 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		73.4 M	<23 M	<115 M	<23 M	34.4 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		201 M	98.9 M	<120 M	91.8 M	146 M	85.9 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2840	1370	989	1710	3090	1420

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.4	86.1	86.4	91.2	0	88.7
Acenaphthene-d10 % recovery**	%	TM218		87	87.1	86	88.3	86.4	87.1
Phenanthrene-d10 % recovery**	%	TM218		88.8	86.6	83.7	84.8	85.1	83.7
Chrysene-d12 % recovery**	%	TM218		79	85.4	78.9	79.1	79.2	72.9
Perylene-d12 % recovery**	%	TM218		77.3	78.5	73.3	77.1	77.1	63.8
Naphthalene	<9 µg/kg	TM218		<90 M	62.9 M	56.1 M	20.5 M	95 M	48.8 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	20.3 M	<12 M	15.9 M	<12 M	25.8 M
Acenaphthene	<8 µg/kg	TM218		<80 M	<8 M	18.4 M	<8 M	<8 M	9.57 M
Fluorene	<10 µg/kg	TM218		<100 M	12.6 M	52.9 M	<10 M	21.2 M	20.8 M
Phenanthrene	<15 µg/kg	TM218		<150 M	129 M	147 M	89.4 M	129 M	293 M
Anthracene	<16 µg/kg	TM218		<160 M	30.9 M	<16 M	31 M	<16 M	73.3 M
Fluoranthene	<17 µg/kg	TM218		<170 M	170 M	92.7 M	206 M	257 M	417 M
Pyrene	<15 µg/kg	TM218		<150 M	147 M	85.8 M	162 M	215 M	324 M
Benz(a)anthracene	<14 µg/kg	TM218		<140 M	104 M	59.5 M	95.2 M	202 M	228 M
Chrysene	<10 µg/kg	TM218		<100 M	115 M	57.2 M	94.5 M	172 M	245 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		<150 M	201 M	98.2 M	92.1 M	242 M	226 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<140 M	57.2 M	33.2 M	39.3 M	<14 M	92.2 M
Benzo(a)pyrene	<15 µg/kg	TM218		<150 M	108 M	53.9 M	76.7 M	143 M	182 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<180 M	102 M	52.8 M	56.3 M	105 M	134 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 M	<23 M	<23 M	<23 M	<23 M	38.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<240 M	92.7 M	50.9 M	53.1 M	93.2 M	139 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		<1180	1350	859	1030	1670	2500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		87.2	89	86.1	92.2	87.9	91.3
Acenaphthene-d10 % recovery**	%	TM218		87.3	85.1	83.2	88.4	85.9	87.5
Phenanthrene-d10 % recovery**	%	TM218		85.1	83.7	74.9	85	86.7	84.1
Chrysene-d12 % recovery**	%	TM218		67.5	72.9	42.5	76.2	83.7	79.1
Perylene-d12 % recovery**	%	TM218		63.7	69	27.1	77	82	78.3
Naphthalene	<9 µg/kg	TM218		102 M	54.9 M	38.3 M	11.2 #	1440 M	67.6 M
Acenaphthylene	<12 µg/kg	TM218		17.2 M	<12 M	<12 M	<12 #	341 M	19.4 M
Acenaphthene	<8 µg/kg	TM218		56.4 M	11.2 M	<8 M	<8 #	65.1 M	<8 M
Fluorene	<10 µg/kg	TM218		211 M	27.4 M	12 M	<10 #	279 M	37.4 M
Phenanthrene	<15 µg/kg	TM218		442 M	183 M	113 M	28.7 #	1940 M	137 M
Anthracene	<16 µg/kg	TM218		79.2 M	37.9 M	<16 M	<16 #	530 M	28.3 M
Fluoranthene	<17 µg/kg	TM218		347 M	268 M	82.9 M	28.5 #	2930 M	99.1 M
Pyrene	<15 µg/kg	TM218		312 M	232 M	72.8 M	24.6 #	2190 M	77.6 M
Benz(a)anthracene	<14 µg/kg	TM218		260 M	200 M	22.1 M	16.5 #	1340 M	52 M
Chrysene	<10 µg/kg	TM218		258 M	219 M	25.1 M	16 #	1330 M	56.7 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		383 M	316 M	19.1 M	28 #	1930 M	90.5 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		140 M	102 M	<14 M	<14 #	613 M	27.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		311 M	215 M	<15 M	<15 #	1210 M	41.3 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		203 M	137 M	<18 M	<18 #	946 M	35.3 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		57.5 M	42.6 M	<23 M	<23 #	197 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		209 M	145 M	<24 M	<24 #	806 M	35.4 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3390	2190	385	153	18100	805

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		89.9	87.5	91.8	87.5	89	85.5
Acenaphthene-d10 % recovery**	%	TM218		87.8	92.5	88.3	90.4	86.7	87.6
Phenanthrene-d10 % recovery**	%	TM218		84.4	96	86.8	94.8	86.4	87.8
Chrysene-d12 % recovery**	%	TM218		80.4	91.5	88.7	90	79.8	76.5
Perylene-d12 % recovery**	%	TM218		79.9	86.5	89.6	80.1	76.6	70.5
Naphthalene	<9 µg/kg	TM218		71.6 #	<450 M	72.6 M	25.1 M	47.3 M	64 M
Acenaphthylene	<12 µg/kg	TM218		<12 #	<600 M	<60 M	<12 M	14.7 M	18 M
Acenaphthene	<8 µg/kg	TM218		<8 #	<400 M	<40 M	<8 M	<8 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 #	<500 M	<50 M	<10 M	<10 M	14.2 M
Phenanthrene	<15 µg/kg	TM218		63 #	962 M	<75 M	72.2 M	106 M	115 M
Anthracene	<16 µg/kg	TM218		18.8 #	<800 M	<80 M	<16 M	22.7 M	32.8 M
Fluoranthene	<17 µg/kg	TM218		91.6 #	995 M	<85 M	122 M	149 M	158 M
Pyrene	<15 µg/kg	TM218		67.8 #	913 M	<75 M	117 M	122 M	120 M
Benz(a)anthracene	<14 µg/kg	TM218		36.2 #	<700 M	<70 M	72.3 M	69.7 M	82.2 M
Chrysene	<10 µg/kg	TM218		28.2 #	<500 M	60.8 M	77.8 M	72.3 M	89.4 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		41.1 #	<750 M	89.8 M	119 M	115 M	150 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 #	<700 M	<70 M	35.7 M	32.6 M	47.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		22.8 #	<750 M	<75 M	63.9 M	65.5 M	74.6 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 #	<900 M	<90 M	54.9 M	59.3 M	75.5 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 #	<1150 M	<115 M	<23 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 #	<1200 M	<120 M	57.5 M	57.3 M	65.2 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		441	<5900	<590	818	933	1110

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90.4	87.8				
Acenaphthene-d10 % recovery**	%	TM218		87	86.1				
Phenanthrene-d10 % recovery**	%	TM218		79.7	83.5				
Chrysene-d12 % recovery**	%	TM218		61	79				
Perylene-d12 % recovery**	%	TM218		50.4	69.6				
Naphthalene	<9 µg/kg	TM218		13.5 M	47.7 M				
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M				
Acenaphthene	<8 µg/kg	TM218		<8 M	17.9 M				
Fluorene	<10 µg/kg	TM218		<10 M	29.2 M				
Phenanthrene	<15 µg/kg	TM218		46 M	182 M				
Anthracene	<16 µg/kg	TM218		<16 M	49 M				
Fluoranthene	<17 µg/kg	TM218		41.4 M	294 M				
Pyrene	<15 µg/kg	TM218		37.1 M	293 M				
Benz(a)anthracene	<14 µg/kg	TM218		26 M	125 M				
Chrysene	<10 µg/kg	TM218		34.6 M	136 M				
Benzo(b)fluoranthene	<15 µg/kg	TM218		58.2 M	196 M				
Benzo(k)fluoranthene	<14 µg/kg	TM218		17.1 M	50.9 M				
Benzo(a)pyrene	<15 µg/kg	TM218		25.9 M	106 M				
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		22 M	93.5 M				
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M				
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	79.3 M				
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		322	1700				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		80.1	79.3	79.7	35.1 4	86.2	117
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	10.5
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	21.1
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	24.6
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2780	<1000	2450	7050	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		10100	3780	15000	23700	1920	3580
Aliphatics >C21-C35	<1000 µg/kg	TM414		29900	20700	98800	35500	17200	10700
Aliphatics >C35-C44	<1000 µg/kg	TM414		4240	12100	67500	7370	4160	1170
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		47200	37700	184000	73900	23400	16300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		58800	49400	225000	116000	42400	20300
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	19.9
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10	16.4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	4090	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2020	<1000	1170	6640	2840	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		8050	9560	34400	27900	14600	2440
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1270	4610	3050	1300	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1190	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		11600	11600	40700	41800	19000	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		58800	49400	225000	116000	42400	16400
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50	56.2
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	<20	56.2

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		113	86.7	86.5	90.2	97.7	67 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	47.2	<10	16.1	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	388	<10	47.2	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	3000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	33100	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1190	4470	50600	<1000	<1000	1790
Aliphatics >C21-C35	<1000 µg/kg	TM414		9020	19900	67000	<1000	5790	8620
Aliphatics >C35-C44	<1000 µg/kg	TM414		1370	6240	14300	<1000	1390	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11700	31200	168000	<5000	7180	11300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		32700	50400	198000	<10000	12500	31100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	259	<10	31.1	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	9290	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2340	<1000	9860	<1000	<1000	1890
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17400	17500	9820	1180	3980	15200
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1340	<1000	<1000	<1000	<1000	2530
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		21000	19300	30100	<5000	5320	19800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		32700	50400	199000	<10000	12600	31100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	436	<50	63.3	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	259	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	695	<20	63.3	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		97.4	69.3 4	92.6	109	80.5 2	88.1
Aliphatics >C5-C6	<10 µg/kg	TM089		13.6	<10 4	<10	18.2	38.4 2	42.9
Aliphatics >C6-C8	<10 µg/kg	TM089		36	<10 4	<10	41	64.4 2	98.3
Aliphatics >C8-C10	<10 µg/kg	TM089		37.2	<10 4	<10	85.5	50.9 2	525
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	13700
Aliphatics >C12-C16	<1000 µg/kg	TM414		2050	1170	<1000	4070	4050	9440
Aliphatics >C16-C21	<1000 µg/kg	TM414		6720	6340	20500	6360	11600	4010
Aliphatics >C21-C35	<1000 µg/kg	TM414		12400	10800	38000	17000	32300	39700
Aliphatics >C35-C44	<1000 µg/kg	TM414		2220	1300	1090	6100	31300	18900
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		23400	19600	60400	33500	79800	85700
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		42100	34700	69200	39500	150000	99000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10 2	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10 2	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		24.8	<10 4	<10	57	33.9 2	350
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1950	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1640	<1000	<1000	<1000	2950	1170
Aromatics > EC16-EC21	<1000 µg/kg	TM414		3730	2720	2140	<1000	13500	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		12300	10500	5160	4640	48100	9210
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3990	1350
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		18700	15100	8800	6040	70500	13300
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		42200	34700	69200	39700	150000	100000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		86.8	<50 4	<50	145	154 2	667
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	57	<50 2	350
GRO >C5-C10	<20 µg/kg	TM089		86.8	<20 4	<20	202	154 2	1020

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		90.1	72.6	104	122	70.4	124
Aliphatics >C5-C6	<10 µg/kg	TM089		18	27.8	20.7	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		30.8	43.3	33.8	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		40.3	65.5	38.1	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<10000	2050	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<10000	7070	<1000	5000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1100	25000	4650	5280	14800	1260
Aliphatics >C21-C35	<1000 µg/kg	TM414		2790	343000	34400	18900	34300	4850
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	375000	48300	4980	3520	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	747000	96400	30100	57600	6190
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	1160000	142000	55800	67400	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		27.6	43.3	26.1	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<10000	<1000	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		1400	381000	39300	22600	7590	2440
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	32500	4470	2600	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	15000	1230	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	415000	45300	25700	9730	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	1160000	142000	55800	67400	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		89.1	137	92.6	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		89.1	137	92.6	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2				
			Depth (m)	0.60 - 0.60	1.30 - 1.30				
			Sample Type	Soil/Solid (S)	Soil/Solid (S)				
			Date Sampled	13/01/2021	13/01/2021				
			Sample Time	.	.				
			Date Received	14/01/2021	14/01/2021				
			SDG Ref	210114-156	210114-156				
			Lab Sample No.(s)	23544215	23544221				
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94.3	126				
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10				
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10				
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10				
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000				
Aliphatics >C16-C21	<1000 µg/kg	TM414		6380	10000				
Aliphatics >C21-C35	<1000 µg/kg	TM414		10800	33000				
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	1510				
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		18500	44800				
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		47500	56300				
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10				
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10				
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10				
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000				
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	1720				
Aromatics > EC21-EC35	<1000 µg/kg	TM414		25900	8780				
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2710	<1000				
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000				
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		29000	11600				
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		47500	56300				
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50				
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50				
GRO >C5-C10	<20 µg/kg	TM089		<20	<20				

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2
			Depth (m)	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544315	23544309	23544291	23544302	23544336	23544341
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	111	105	107	108
Toluene-d8**	%	TM116		94.5	98.2	95.8	96	96.7	96.7
4-Bromofluorobenzene**	%	TM116		87.2	97.1	89.8	90.4	93.6	95.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AU28-1	AV22-1	AV22-2	AV23-1	AV23-2	AV28-1
			Depth (m)	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	1.60 - 1.60	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544284	23544150	23544263	23544346	23544351	23544251
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	104	109	106	103
Toluene-d8**	%	TM116		95.8	97.9	97.6	96.8	97.3	95.5
4-Bromofluorobenzene**	%	TM116		92.3	93.9	93.1	94.1	95.3	88.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2
			Depth (m)	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	12/01/2021	12/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544270	23544277	23544237	23544246	23544320	23544325
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	104	105	110	105 2	106
Toluene-d8**	%	TM116		94.6	97.8	98	98.2	94.3 2	96.9
4-Bromofluorobenzene**	%	TM116		88.1	95.9	96.9	92.2	87.8 2	92.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 #	<200 2 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 #	<180 2 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 #	<140 2 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 #	<80 2 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 2 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 #	<200 2 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 #	536 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4 2	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800 2	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW22-3	AW23-1	AW23-2	AW26-1	AW28-1	AW28-2
			Depth (m)	2.40 - 2.40	0.60 - 0.60	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	12/01/2021	12/01/2021	12/01/2021	12/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156	210114-156	210114-156	210114-156	210114-156
			Lab Sample No.(s)	23544330	23544170	23544178	23544190	23544196	23544202
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	112	107	112	104	107
Toluene-d8**	%	TM116		98.5	94.5	97.3	95.9	97.9	96.8
4-Bromofluorobenzene**	%	TM116		97.8	93.9	95.7	93.5	98.1	97.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 #	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 #	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 #	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 #	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 #	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 #	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AW29-1	AW29-2
			Depth (m)	0.60 - 0.60	1.30 - 1.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021
			Sample Time	.	.
			Date Received	14/01/2021	14/01/2021
			SDG Ref	210114-156	210114-156
			Lab Sample No.(s)	23544215	23544221
			AGS Reference		
Dibromofluoromethane**	%	TM116		110	105
Toluene-d8**	%	TM116		97.9	98.8
4-Bromofluorobenzene**	%	TM116		98.5	97.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AS29-1 1.00 - 1.00 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544309 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AT29-1 0.50 - 0.50 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544291 TM048	20/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AU23-2 1.40 - 1.40 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544341 TM048	19/01/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV22-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544150 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV23-2 1.60 - 1.60 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544351 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV28-1 0.30 - 0.30 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544251 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV28-3 2.20 - 2.20 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544277 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AV29-1 0.80 - 0.80 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544237 TM048	20/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW22-1 0.50 - 0.50 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544320 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW22-3 2.40 - 2.40 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544330 TM048	20/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW23-2 1.70 - 1.70 SOLID 12/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544178 TM048	19/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW28-1 0.40 - 0.40 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544196 TM048	20/01/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AW29-1 0.60 - 0.60 SOLID 13/01/2021 00:00:00 14/01/2021 05:00:00 210114-156 23544215 TM048	20/01/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AU23-2	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.40 - 1.40					
Sample Type	SOLID					
Date Sampled	12/01/2021 00:00:00					
Date Received	14/01/2021 05:00:00					
SDG	210114-156					
Original Sample	23544341					
Method Number	TM304					
Cust. Sample Ref.	AW29-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.60 - 0.60					
Sample Type	SOLID					
Date Sampled	13/01/2021 00:00:00					
Date Received	14/01/2021 05:00:00					
SDG	210114-156					
Original Sample	23544215					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210114-156	**Client Reference:**	P18-669	**Report Number:**	584521
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584114

Test Completion Dates

Lab Sample No(s)	23544315	23544309	23544291	23544302	23544336	23544341	23544284	23544150	23544263	23544346
Customer Sample Ref.	AR29-1	AS29-1	AT29-1	AT29-2	AU23-1	AU23-2	AU28-1	AV22-1	AV22-2	AV23-1
AGS Ref.										
Depth	1.20 - 1.20	1.00 - 1.00	0.50 - 0.50	1.10 - 1.10	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples		20-Jan-2021	20-Jan-2021			19-Jan-2021		21-Jan-2021		
Asbestos Quantification - Full						25-Jan-2021				
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	20-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021
pH	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	15-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	20-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
TPH CWG GC (S)	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021
VOC MS (S)	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021

Lab Sample No(s)	23544351	23544251	23544270	23544277	23544237	23544246	23544320	23544325	23544330	23544170
Customer Sample Ref.	AV23-2	AV28-1	AV28-2	AV28-3	AV29-1	AV29-2	AW22-1	AW22-2	AW22-3	AW23-1
AGS Ref.										
Depth	1.60 - 1.60	0.30 - 0.30	1.20 - 1.20	2.20 - 2.20	0.80 - 0.80	1.70 - 1.70	0.50 - 0.50	1.30 - 1.30	2.40 - 2.40	0.60 - 0.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	20-Jan-2021	21-Jan-2021		20-Jan-2021	20-Jan-2021		21-Jan-2021		20-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	18-Jan-2021	18-Jan-2021	18-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	18-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	19-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021
pH	15-Jan-2021	15-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	20-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	21-Jan-2021
VOC MS (S)	19-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23544178	23544190	23544196	23544202	23544215	23544221
Customer Sample Ref.	AW23-2	AW26-1	AW28-1	AW28-2	AW29-1	AW29-2
AGS Ref.						
Depth	1.70 - 1.70	0.50 - 0.50	0.40 - 0.40	1.40 - 1.40	0.60 - 0.60	1.30 - 1.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
Asbestos ID in Solid Samples	19-Jan-2021		20-Jan-2021		20-Jan-2021	
Asbestos Quantification - Full					27-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	20-Jan-2021	19-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
EPH CWG GC (S)	20-Jan-2021	20-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	19-Jan-2021
GRO by GC-FID (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
Metals in solid samples by OES	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021
PAH by GCMS	20-Jan-2021	20-Jan-2021	19-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
pH	15-Jan-2021	15-Jan-2021	18-Jan-2021	20-Jan-2021	18-Jan-2021	15-Jan-2021
Phenols by HPLC (S)	20-Jan-2021	21-Jan-2021	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021
Sample description	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021	15-Jan-2021
Total Organic Carbon	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021
TPH CWG GC (S)	20-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021	20-Jan-2021	20-Jan-2021
VOC MS (S)	21-Jan-2021	19-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	28 January 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210115-27
Your Reference:	P18-669
Location:	Llanwern
Report No:	584712

This report has been revised and directly supersedes 584671 in its entirety.

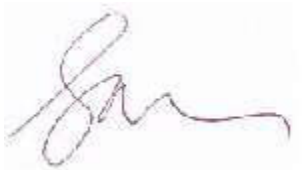
We received 27 samples on Friday January 15, 2021 and 27 of these samples were scheduled for analysis which was completed on Thursday January 28, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23547855	AL24-1		0.70 - 0.70	13/01/2021
23547865	AL24-2		1.30 - 1.30	13/01/2021
23547873	AM33-1		0.30 - 0.30	13/01/2021
23547879	AM33-2		1.30 - 1.30	13/01/2021
23547829	AN23-1		0.20 - 0.20	13/01/2021
23547841	AN23-2		1.50 - 1.50	13/01/2021
23548024	AO27-1		0.60 - 0.60	13/01/2021
23548034	AO27-2		1.20 - 1.20	13/01/2021
23547788	AO29-1		0.50 - 0.50	13/01/2021
23547917	AO29-2		1.50 - 1.50	13/01/2021
23548085	AQ24-1		0.20 - 0.20	13/01/2021
23547819	AQ24-2		1.50 - 1.50	13/01/2021
23548065	AQ25-1		0.20 - 0.20	13/01/2021
23548075	AQ25-2		1.50 - 1.50	13/01/2021
23548044	AQ26-1		0.20 - 0.20	13/01/2021
23548052	AQ26-2		1.50 - 1.50	13/01/2021
23547887	W168-1		0.20 - 0.20	14/01/2021
23547896	W168-2		0.20 - 0.20	14/01/2021
23547907	W168-3		0.20 - 0.20	14/01/2021
23547927	W168-4		0.20 - 0.20	14/01/2021
23547935	W168-5		0.20 - 0.20	14/01/2021
23547942	W168-6		0.20 - 0.20	14/01/2021
23547958	W168-7		0.20 - 0.20	14/01/2021
23547970	W168-8		0.20 - 0.20	14/01/2021
23547983	W168-9		0.20 - 0.20	14/01/2021
23548001	W168-10		0.20 - 0.20	14/01/2021
23548010	W168-11		0.20 - 0.20	14/01/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23547855		23547865		23547873		23547879		23547929		23547841		23548024		23548034	
Customer Sample Reference			AL24-1		AL24-2		AM33-1		AM33-2		AN23-1		AN23-2		AO27-1		AO27-2	
AGS Reference																		
Depth (m)			0.70 - 0.70		1.30 - 1.30		0.30 - 0.30		1.30 - 1.30		0.20 - 0.20		1.50 - 1.50		0.60 - 0.60		1.20 - 1.20	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 14	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 26		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 27		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	

23548052	AQ26-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23548044	AQ26-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23548075	AQ25-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23548065	AQ25-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x	x															
23547819	AQ24-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23548085	AQ24-1		0.20 - 0.20	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23547917	AO29-2		1.50 - 1.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
23547788	AO29-1		0.50 - 0.50	60g VOC (ALE215)	S							x											x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x				
				1kg TUB with Handle (ALE260)	S		x																
23548034	AO27-2		1.20 - 1.20	60g VOC (ALE215)	S							x											x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)				23547887		23547896		23547907		23547927		23547935		23547942		23547958		23547970			
Customer Sample Reference				W168-1		W168-2		W168-3		W168-4		W168-5		W168-6		W168-7		W168-8			
AGS Reference																					
Depth (m)				0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20			
Container				1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type				S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 14		X					X					X					X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
EPH CWG GC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 27				X		X			X		X			X		X				
Metals in solid samples by OES	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
PAH by GCMS	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
pH	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
Sample description	All	NDPs: 0 Tests: 26			X		X			X		X			X		X			X	X
Total Organic Carbon	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 27			X		X			X		X			X		X			X	X
VOC MS (S)	All	NDPs: 0 Tests: 27				X		X			X		X			X		X				

23548010	W168-11		0.20 - 0.20	60g VOC (ALE215)	S	
				250g Amber Jar (ALE210)	S	X
				1kg TUB with Handle (ALE260)	S	
23548001	W168-10		0.20 - 0.20	60g VOC (ALE215)	S	X
				250g Amber Jar (ALE210)	S	X
23547983	W168-9		0.20 - 0.20	60g VOC (ALE215)	S	X
				250g Amber Jar (ALE210)	S	X
				1kg TUB with Handle (ALE260)	S	X
23547970	W168-8		0.20 - 0.20	60g VOC (ALE215)	S	X

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23547855	AL24-1	0.70 - 0.70	Black	Sand	Stones	None
23547865	AL24-2	1.30 - 1.30	Grey	Gravel	Stones	None
23547873	AM33-1	0.30 - 0.30	Dark Brown	Sand	Stones	None
23547879	AM33-2	1.30 - 1.30	Dark Brown	Sand	Stones	None
23547829	AN23-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547841	AN23-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548024	AO27-1	0.60 - 0.60	Dark Brown	Sandy Loam	Stones	Vegetation
23548034	AO27-2	1.20 - 1.20	Grey	Sand	Stones	N/A
23547788	AO29-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23547917	AO29-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548085	AQ24-1	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23547819	AQ24-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23548065	AQ25-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23548075	AQ25-2	1.50 - 1.50	Dark Brown	Sand	None	Stones
23548044	AQ26-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23548052	AQ26-2	1.50 - 1.50	Dark Brown	Sand	None	Stones
23547887	W168-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547896	W168-2	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Stones
23547907	W168-3	0.20 - 0.20	Dark Brown	Silt Loam	Stones	Vegetation
23547927	W168-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547935	W168-5	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23547942	W168-6	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23547958	W168-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23547970	W168-8	0.20 - 0.20	Dark Brown	Silt Loam	Stones	Vegetation
23547983	W168-9	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23548001	W168-10	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23548010	W168-11	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Tar

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	13	8.3	8.6	5.8	8.2
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 #	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		>100 #	2.76 #	1.19 #	10.3 #	3.64 #	1.11 #
pH	1 pH Units	TM133		10.4 M	11 #	12.6 M	11.8 M	12 M	12.7 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.68 M	1.33 #	7.22 M	9.12 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 #	<0.2 M	0.258 M	0.477 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		13.1 M	7.04 #	628 M	121 M	841 M	376 M
Copper	<1.4 mg/kg	TM181		12.2 M	<1.4 #	14.5 M	23.8 M	<14 M	26.1 M
Iron	<1000 mg/kg	TM181		31600 #	12000 #	180000 #	65800 #	159000 #	139000 #
Lead	<0.7 mg/kg	TM181		18.4 M	<0.7 #	22.5 M	23.5 M	7.35 M	14.9 M
Manganese	<0.13 mg/kg	TM181		2410 M	4760 #	209000 M	5090 M	33700 M	34500 M
Mercury	<0.14 mg/kg	TM181		<0.14 M	<0.14 #	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		10.4 M	0.818 #	24.6 M	45.1 M	9.88 M	20.6 M
Selenium	<1 mg/kg	TM181		2.33 #	2.98 #	22.7 #	<10 #	18.6 #	24 #
Vanadium	<0.2 mg/kg	TM181		28.7 #	23.1 #	571 #	96 #	839 #	1800 #
Zinc	<1.9 mg/kg	TM181		83.8 M	10.8 #	63.9 M	86.6 M	75.2 M	51.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.3	7	7.4	6.5	16	5.5
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		13.6 #	2.5 #	5.14 #	20.5 #	5.65 #	1.14 #
pH	1 pH Units	TM133		11.4 M	11.9 M	8.92 M	12.6 M	10.7 M	11.8 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.95 M	7.22 M	9.67 M	<6 M	<60 M	11 M
Cadmium	<0.02 mg/kg	TM181		0.893 M	<0.2 M	1.81 M	0.401 M	<2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		131 M	39.8 M	456 M	802 M	291 M	28.6 M
Copper	<1.4 mg/kg	TM181		79.3 M	<14 M	81.4 M	<14 M	<140 M	16.8 M
Iron	<1000 mg/kg	TM181		107000 #	430000 #	140000 #	140000 #	116000 #	356000 #
Lead	<0.7 mg/kg	TM181		135 M	26.3 M	165 M	7.04 M	84.8 M	17.6 M
Manganese	<0.13 mg/kg	TM181		11600 M	6230 M	23400 M	38000 M	16500 M	6350 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	1.84 M	<1.4 M	<1.4 M	<14 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		31.2 M	18.1 M	29.7 M	7.31 M	155 M	35.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	10.1 #	21.7 #	<100 #	<10 #
Vanadium	<0.2 mg/kg	TM181		396 #	325 #	419 #	681 #	696 #	235 #
Zinc	<1.9 mg/kg	TM181		764 M	191 M	531 M	44.5 M	207 M	186 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		24	8.2	18	6.7	13	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0109 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	0.0114 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		19.1 #	1.57 #	7.38 #	0.924 #	27.9 #	26.5 #
pH	1 pH Units	TM133		9.53 M	12.7 M	9.19 M	12.7 M	9.42 M	9.7 M
Cyanide, Total	<1 mg/kg	TM153		1.06 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.52 M	<6 M	8.64 M	6.23 M	8 M	8.65 M
Cadmium	<0.02 mg/kg	TM181		1.23 M	<0.2 M	0.337 M	0.794 M	0.896 M	1.26 M
Chromium	<0.9 mg/kg	TM181		257 M	565 M	255 M	302 M	182 M	323 M
Copper	<1.4 mg/kg	TM181		25.6 M	28.5 M	19.3 M	20.4 M	30.2 M	19.5 M
Iron	<1000 mg/kg	TM181		98900 #	210000 #	86000 #	253000 #	72100 #	94900 #
Lead	<0.7 mg/kg	TM181		132 M	24.2 M	121 M	18.9 M	142 M	204 M
Manganese	<0.13 mg/kg	TM181		13100 M	49500 M	13700 M	24100 M	21000 M	15500 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		21.8 M	23.7 M	20.8 M	39 M	17.9 M	19.8 M
Selenium	<1 mg/kg	TM181		<10 #	27.6 #	10.7 #	<10 #	12.9 #	13.8 #
Vanadium	<0.2 mg/kg	TM181		361 #	1960 #	318 #	1300 #	270 #	357 #
Zinc	<1.9 mg/kg	TM181		446 M	55.6 M	359 M	114 M	501 M	596 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		0.0083 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		Chrysotile detected. #					
Analysts Comments		TM304		Fibre bundles in soil.					
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0083 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	12	20	11	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0116 M	<0.01 M	0.0126 M	<0.01 M	0.0234 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0126 M	<0.01 M	0.0117 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		27.6 #	28.1 #	19.3 #	28.8 #	24.5 #	13.3 #
pH	1 pH Units	TM133		9.15 M	9.82 M	10.2 M	9.24 M	9.65 M	9.08 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.73 M	10.8 M	8.38 M	9.62 M	7.96 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.23 M	0.989 M	2.1 M	3.45 M	1.3 M	1.01 M
Chromium	<0.9 mg/kg	TM181		253 M	354 M	304 M	271 M	298 M	175 M
Copper	<1.4 mg/kg	TM181		19.8 M	28.4 M	23.9 M	28.1 M	24.1 M	17 M
Iron	<1000 mg/kg	TM181		87600 #	140000 #	124000 #	99000 #	85000 #	78100 #
Lead	<0.7 mg/kg	TM181		107 M	217 M	241 M	184 M	130 M	93.1 M
Manganese	<0.13 mg/kg	TM181		16000 M	16800 M	17100 M	12000 M	16000 M	12600 M
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		19.1 M	25.1 M	20 M	22.1 M	19.1 M	20 M
Selenium	<1 mg/kg	TM181		<10 #	13.6 #	<10 #	11.1 #	11.4 #	<10 #
Vanadium	<0.2 mg/kg	TM181		328 #	365 #	408 #	286 #	290 #	200 #
Zinc	<1.9 mg/kg	TM181		364 M	806 M	903 M	564 M	454 M	324 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	9.1	14			
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M			
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.011 M	0.0117 M			
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	0.011 M	<0.01 M			
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M			
Soil Organic Matter (SOM)	<0.35 %	TM132		23.3 #	30.9 #	30.2 #			
pH	1 pH Units	TM133		10.1 M	9.95 M	10.7 M			
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M			
Arsenic	<0.6 mg/kg	TM181		7.75 M	9.37 M	8.5 M			
Cadmium	<0.02 mg/kg	TM181		2.49 M	1.39 M	2.29 M			
Chromium	<0.9 mg/kg	TM181		248 M	283 M	290 M			
Copper	<1.4 mg/kg	TM181		20 M	28.2 M	21.2 M			
Iron	<1000 mg/kg	TM181		98300 #	109000 #	111000 #			
Lead	<0.7 mg/kg	TM181		314 M	200 M	255 M			
Manganese	<0.13 mg/kg	TM181		14000 M	14600 M	17400 M			
Mercury	<0.14 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M			
Nickel	<0.2 mg/kg	TM181		18.7 M	25.1 M	19.8 M			
Selenium	<1 mg/kg	TM181		<10 #	13.6 #	13.3 #			
Vanadium	<0.2 mg/kg	TM181		251 #	355 #	365 #			
Zinc	<1.9 mg/kg	TM181		987 M	645 M	940 M			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.9	88.9	88.4	89.6	88.6	91.4
Acenaphthene-d10 % recovery**	%	TM218		85.2	87.3	88.9	91.8	91.7	89.5
Phenanthrene-d10 % recovery**	%	TM218		87.7	87.5	90.1	93.3	92.4	91.3
Chrysene-d12 % recovery**	%	TM218		79.2	83.1	87.1	88.7	82	92.1
Perylene-d12 % recovery**	%	TM218		64.5	85	91.3	92.2	85	95.9
Naphthalene	<9 µg/kg	TM218		426 M	66.3 #	18.5 M	123 M	254 M	253 M
Acenaphthylene	<12 µg/kg	TM218		169 M	18.2 #	<12 M	224 M	72.9 M	58 M
Acenaphthene	<8 µg/kg	TM218		40.7 M	16.9 #	15 M	13.3 M	27.4 M	69.8 M
Fluorene	<10 µg/kg	TM218		129 M	32.3 #	<10 M	125 M	81.2 M	64.9 M
Phenanthrene	<15 µg/kg	TM218		1510 M	262 #	133 M	972 M	782 M	2300 M
Anthracene	<16 µg/kg	TM218		392 M	67.3 #	23.3 M	540 M	206 M	263 M
Fluoranthene	<17 µg/kg	TM218		3040 M	419 #	273 M	2530 M	1100 M	2060 M
Pyrene	<15 µg/kg	TM218		2420 M	420 #	204 M	1750 M	788 M	1410 M
Benz(a)anthracene	<14 µg/kg	TM218		1800 M	191 #	131 M	1270 M	382 M	718 M
Chrysene	<10 µg/kg	TM218		2000 M	202 #	179 M	1370 M	354 M	856 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2780 M	352 #	319 M	1620 M	557 M	1030 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		875 M	121 #	97.9 M	537 M	185 M	421 M
Benzo(a)pyrene	<15 µg/kg	TM218		1820 M	207 #	128 M	986 M	323 M	630 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1440 M	190 #	167 M	813 M	301 M	515 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		345 M	38.5 #	33.7 M	172 M	42.8 M	92.3 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1410 M	170 #	147 M	723 M	249 M	489 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		20600	2770	1870	13800	5710	11200

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		88.5	91.1	90.9	81.7	84.7	84.7
Acenaphthene-d10 % recovery**	%	TM218		91.7	90.9	92.2	88.4	86.6	86.8
Phenanthrene-d10 % recovery**	%	TM218		94.3	90.4	93	91.3	88.3	89.6
Chrysene-d12 % recovery**	%	TM218		87.8	85.7	89.6	81	80	82
Perylene-d12 % recovery**	%	TM218		88.6	87.5	92.9	78.7	81.8	85.3
Naphthalene	<9 µg/kg	TM218		1330 M	311 M	92.3 M	134 M	866 M	416 M
Acenaphthylene	<12 µg/kg	TM218		508 M	54.7 M	40.1 M	14.7 M	279 M	88.9 M
Acenaphthene	<8 µg/kg	TM218		112 M	17.8 M	43.5 M	11.6 M	54.3 M	13.6 M
Fluorene	<10 µg/kg	TM218		419 M	22 M	47.2 M	10.8 M	227 M	63.7 M
Phenanthrene	<15 µg/kg	TM218		3880 M	308 M	366 M	266 M	1930 M	476 M
Anthracene	<16 µg/kg	TM218		944 M	70.6 M	88.6 M	32.3 M	418 M	102 M
Fluoranthene	<17 µg/kg	TM218		6780 M	544 M	749 M	338 M	3040 M	732 M
Pyrene	<15 µg/kg	TM218		4880 M	434 M	661 M	277 M	2250 M	558 M
Benz(a)anthracene	<14 µg/kg	TM218		2890 M	256 M	505 M	181 M	1330 M	319 M
Chrysene	<10 µg/kg	TM218		2690 M	255 M	591 M	206 M	1150 M	292 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4210 M	455 M	910 M	350 M	2100 M	495 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1350 M	138 M	375 M	141 M	682 M	171 M
Benzo(a)pyrene	<15 µg/kg	TM218		2900 M	267 M	609 M	173 M	1360 M	300 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2450 M	232 M	562 M	143 M	1180 M	270 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		368 M	41 M	111 M	<23 M	220 M	53.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2070 M	209 M	580 M	155 M	1090 M	250 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		37800	3620	6330	2430	18200	4600

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
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**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		86	88.5	85.7	88.6	87.5	83.8
Acenaphthene-d10 % recovery**	%	TM218		85.8	90.5	84.9	90.5	89.8	88.1
Phenanthrene-d10 % recovery**	%	TM218		85.2	93	83.1	91.9	91.5	88.7
Chrysene-d12 % recovery**	%	TM218		80.4	89.1	78	89.8	81.6	78.9
Perylene-d12 % recovery**	%	TM218		76.7	92.8	74.9	94.2	78.8	75.5
Naphthalene	<9 µg/kg	TM218		7620 M	1230 M	3890 M	198 M	3280 M	3990 M
Acenaphthylene	<12 µg/kg	TM218		1880 M	830 M	833 M	139 M	977 M	1150 M
Acenaphthene	<8 µg/kg	TM218		264 M	195 M	209 M	135 M	200 M	191 M
Fluorene	<10 µg/kg	TM218		1690 M	1050 M	761 M	146 M	797 M	780 M
Phenanthrene	<15 µg/kg	TM218		13900 M	10400 M	6660 M	3290 M	5600 M	5030 M
Anthracene	<16 µg/kg	TM218		3190 M	1950 M	1420 M	462 M	1690 M	1850 M
Fluoranthene	<17 µg/kg	TM218		20800 M	11900 M	11100 M	3380 M	9570 M	9340 M
Pyrene	<15 µg/kg	TM218		14200 M	8110 M	8060 M	2390 M	6840 M	6890 M
Benz(a)anthracene	<14 µg/kg	TM218		7600 M	4790 M	4410 M	1650 M	4800 M	4770 M
Chrysene	<10 µg/kg	TM218		6160 M	4700 M	3820 M	1680 M	3810 M	3880 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		10600 M	5930 M	6830 M	2290 M	6570 M	6860 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		3740 M	2160 M	2300 M	774 M	2310 M	2390 M
Benzo(a)pyrene	<15 µg/kg	TM218		6210 M	4090 M	3970 M	1330 M	3990 M	4170 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5250 M	3430 M	3700 M	1150 M	3370 M	3590 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		676 M	686 M	454 M	261 M	575 M	623 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4230 M	2930 M	3040 M	1010 M	2610 M	2720 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		108000	64400	61400	20300	57000	58200

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90	84.7	81.8	86.4	80.8	86.6
Acenaphthene-d10 % recovery**	%	TM218		88.9	86.3	81.7	82.3	87.6	82.5
Phenanthrene-d10 % recovery**	%	TM218		91.3	88	87	81.2	91.4	81.9
Chrysene-d12 % recovery**	%	TM218		89.1	79.3	75	75.1	79.5	79.8
Perylene-d12 % recovery**	%	TM218		89.1	77.1	74.4	74.3	73.9	78.1
Naphthalene	<9 µg/kg	TM218		3190 M	4790 M	4390 M	4170 M	4380 M	2180 M
Acenaphthylene	<12 µg/kg	TM218		1490 M	1260 M	1960 M	4800 M	1040 M	1180 M
Acenaphthene	<8 µg/kg	TM218		158 M	255 M	385 M	868 M	221 M	118 M
Fluorene	<10 µg/kg	TM218		903 M	1060 M	1940 M	10300 M	864 M	674 M
Phenanthrene	<15 µg/kg	TM218		6320 M	7170 M	16300 M	47400 M	5590 M	4750 M
Anthracene	<16 µg/kg	TM218		<16 M	3420 M	5230 M	8330 M	1810 M	1510 M
Fluoranthene	<17 µg/kg	TM218		15300 M	13100 M	26500 M	43400 M	9670 M	9990 M
Pyrene	<15 µg/kg	TM218		10900 M	9310 M	18000 M	26900 M	6960 M	7310 M
Benz(a)anthracene	<14 µg/kg	TM218		7830 M	6280 M	10800 M	15400 M	4450 M	4990 M
Chrysene	<10 µg/kg	TM218		7160 M	5610 M	9500 M	16400 M	3790 M	4850 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		10900 M	9250 M	14600 M	17800 M	6520 M	7170 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		3550 M	3030 M	4850 M	5620 M	2240 M	2270 M
Benzo(a)pyrene	<15 µg/kg	TM218		7170 M	5260 M	8700 M	11100 M	3760 M	4420 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5310 M	4270 M	6950 M	8280 M	2850 M	3570 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		1180 M	694 M	1450 M	2030 M	489 M	735 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4730 M	3500 M	5800 M	6960 M	2400 M	3150 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		86000	78300	137000	230000	57000	58900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.6	88.6	82.1			
Acenaphthene-d10 % recovery**	%	TM218		85.6	90.8	80.3			
Phenanthrene-d10 % recovery**	%	TM218		85.9	92.5	83.5			
Chrysene-d12 % recovery**	%	TM218		77.1	88.1	72.6			
Perylene-d12 % recovery**	%	TM218		70.7	84.6	70.8			
Naphthalene	<9 µg/kg	TM218		4520 M	5430 M	4000 M			
Acenaphthylene	<12 µg/kg	TM218		1690 M	1570 M	1250 M			
Acenaphthene	<8 µg/kg	TM218		272 M	213 M	308 M			
Fluorene	<10 µg/kg	TM218		1230 M	1210 M	1300 M			
Phenanthrene	<15 µg/kg	TM218		8820 M	10800 M	9800 M			
Anthracene	<16 µg/kg	TM218		3780 M	3820 M	3220 M			
Fluoranthene	<17 µg/kg	TM218		18000 M	17500 M	15100 M			
Pyrene	<15 µg/kg	TM218		12800 M	12400 M	11000 M			
Benz(a)anthracene	<14 µg/kg	TM218		8290 M	7860 M	7860 M			
Chrysene	<10 µg/kg	TM218		7010 M	6820 M	6930 M			
Benzo(b)fluoranthene	<15 µg/kg	TM218		11300 M	10300 M	10700 M			
Benzo(k)fluoranthene	<14 µg/kg	TM218		4270 M	3230 M	3640 M			
Benzo(a)pyrene	<15 µg/kg	TM218		6560 M	6260 M	6690 M			
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		4730 M	4900 M	5090 M			
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		745 M	1160 M	1170 M			
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4330 M	4090 M	4270 M			
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		98300	97600	92300			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		89.3	115	113	84.8	95.4	103
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		11.8	<10	<10	16.4	<10	22.9
Aliphatics >C8-C10	<10 µg/kg	TM089		10.6	<10	<10	16.4	<10	29.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	1260	<1000	<1000	2920
Aliphatics >C16-C21	<1000 µg/kg	TM414		11400	<1000	9880	3970	3070	14000
Aliphatics >C21-C35	<1000 µg/kg	TM414		5320	4980	62700	8720	22800	108000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	16400	1080	7170	52800
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		17000	5850	90200	14000	33600	178000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		109000	10200	106000	52200	51800	198000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	10.9	<10	19.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		14500	1030	<1000	7120	4670	4730
Aromatics > EC21-EC35	<1000 µg/kg	TM414		67000	2270	13600	25800	11700	12500
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9070	<1000	<1000	5020	<1000	1590
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1370	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		91800	<5000	15500	38300	18200	19700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		109000	<10000	106000	52300	51800	198000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	52.3
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	52.3

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		72.6	105	80.4	103	110	95.8
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	18	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	35.3	82.8	21.2
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	51.4	116	37
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	18800	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1250	1230	<1000	5390	161000	13400
Aliphatics >C16-C21	<1000 µg/kg	TM414		6110	51200	5810	17300	179000	22500
Aliphatics >C21-C35	<1000 µg/kg	TM414		21100	9890	16500	53300	150000	20200
Aliphatics >C35-C44	<1000 µg/kg	TM414		7780	<1000	1940	22700	16400	2850
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		36200	63000	24500	98700	524000	58900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		137000	73000	89300	115000	718000	73000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	34.2	78	24.3
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	1040	1740	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1220	<1000	<1000	1950	32100	3550
Aromatics > EC16-EC21	<1000 µg/kg	TM414		18700	3820	4900	2360	44400	3220
Aromatics > EC21-EC35	<1000 µg/kg	TM414		70800	4990	50900	9400	104000	6030
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9270	<1000	8570	1420	10900	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1720	<1000	1750	<1000	2170	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		101000	9990	64800	16200	194000	14100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		137000	73000	89300	115000	718000	73100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	86.7	217	58.2
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	78	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	86.7	295	58.2

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		66.9 4	95.3	85.7	101	36.2 4	30.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		43.2 4	<10	11	<10	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		83.8 4	<10	45.1	<10	28.8 4	14.8 4
Aliphatics >C8-C10	<10 µg/kg	TM089		148 4	<10	45.1	<10	46 4	11.4 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		3270	1440	1960	<1000	1980	2630
Aliphatics >C16-C21	<1000 µg/kg	TM414		11000	9490	6420	7270	13800	12100
Aliphatics >C21-C35	<1000 µg/kg	TM414		46000	64500	20900	51100	25200	33300
Aliphatics >C35-C44	<1000 µg/kg	TM414		13300	32900	4250	18200	4530	9690
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		74500	108000	33600	77400	45600	58300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		447000	158000	210000	106000	421000	256000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		98.3 4	<10	30.5	<10	29.9 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		12200	<1000	2820	<1000	5060	5160
Aromatics > EC12-EC16	<1000 µg/kg	TM414		14300	1080	3480	<1000	16900	7030
Aromatics > EC16-EC21	<1000 µg/kg	TM414		104000	10000	30300	6190	128000	39600
Aromatics > EC21-EC35	<1000 µg/kg	TM414		218000	31300	125000	19600	195000	127000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		24100	6460	15200	2600	29900	18900
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5410	1250	2070	<1000	3630	4130
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		372000	49200	177000	28800	375000	197000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		447000	158000	211000	106000	421000	256000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		275 4	<50	101	<50	74.8 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		98.3 4	<50	<50	<50	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		373 4	<20	101	<20	74.8 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		49.2 4	49.1 4	36.4 4	39.5 4	31.1 4	50.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	32.5 4	13.7 4	<10 4	14.6 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	34.8 4	12.5 4	<10 4	13.4 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1050	<1000	1070	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	3750	4140	2460	3710	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1290	14200	20900	14500	15600	3110
Aliphatics >C21-C35	<1000 µg/kg	TM414		4110	36200	45200	31100	43800	10600
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	13200	12200	6550	11000	1840
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		6350	68000	83500	55000	75200	16900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		159000	391000	309000	303000	315000	164000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	23.2 4	<10 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2510	5560	5780	5200	8120	2670
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3860	10400	8860	7720	9860	6080
Aromatics > EC16-EC21	<1000 µg/kg	TM414		32900	81300	49100	48500	49100	27000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		98800	201000	143000	163000	143000	92900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		14500	24800	18300	23700	29200	18700
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1790	5510	3370	2940	5010	2350
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		153000	323000	225000	248000	240000	147000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		159000	392000	309000	303000	315000	164000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	67.3 4	<50 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	67.3 4	<20 4	<20 4	<20 4	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		36.1 4	47.9 4	45.2 4			
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	14.3 4	<10 4			
Aliphatics >C6-C8	<10 µg/kg	TM089		21.7 4	29.7 4	32.8 4			
Aliphatics >C8-C10	<10 µg/kg	TM089		22.8 4	24.2 4	30.4 4			
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	1000	<1000			
Aliphatics >C12-C16	<1000 µg/kg	TM414		4480	4680	4010			
Aliphatics >C16-C21	<1000 µg/kg	TM414		18300	25800	26900			
Aliphatics >C21-C35	<1000 µg/kg	TM414		42100	50200	50800			
Aliphatics >C35-C44	<1000 µg/kg	TM414		12200	14900	10200			
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		78000	96700	92400			
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		329000	295000	363000			
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4			
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4			
Aromatics >EC8-EC10	<10 µg/kg	TM089		14.8 4	16.5 4	19.9 4			
Aromatics > EC10-EC12	<1000 µg/kg	TM414		6170	5970	7070			
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8870	9030	10300			
Aromatics > EC16-EC21	<1000 µg/kg	TM414		52600	40600	60300			
Aromatics > EC21-EC35	<1000 µg/kg	TM414		163000	125000	169000			
Aromatics >EC35-EC44	<1000 µg/kg	TM414		20400	17900	24200			
Aromatics > EC40-EC44	<1000 µg/kg	TM414		2990	2720	3480			
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		251000	198000	271000			
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		329000	295000	363000			
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	68.2 4	63.2 4			
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4			
GRO >C5-C10	<20 µg/kg	TM089		<20 4	68.2 4	63.2 4			

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2
			Depth (m)	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547855	23547865	23547873	23547879	23547829	23547841
			AGS Reference						
Dibromofluoromethane**	%	TM116		113	110	104	106	108	103
Toluene-d8**	%	TM116		98.4	98.8	97.3	96.3	97.8	97.6
4-Bromofluorobenzene**	%	TM116		92.5	98.3	95.2	93.8	97.2	97.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 #	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AO27-1	AO27-2	AO29-1	AO29-2	AQ24-1	AQ24-2
			Depth (m)	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021	13/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548024	23548034	23547788	23547917	23548085	23547819
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	109	110	112	103	106
Toluene-d8**	%	TM116		99.2	98.6	99.1	99.2	96.3	103
4-Bromofluorobenzene**	%	TM116		93.3	99.5	95.4	96.7	87.9	95.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	1200 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2
			Depth (m)	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	13/01/2021	13/01/2021	13/01/2021	13/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23548065	23548075	23548044	23548052	23547887	23547896
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	102	99.8	103	88.7	96.2
Toluene-d8**	%	TM116		95.4	96.1	96.4	96.9	90.4	96.5
4-Bromofluorobenzene**	%	TM116		89.9	96.8	85.3	96.7	74.3	84
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		1410 M	<260 M	1710 M	<260 M	1680 M	819 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-3	W168-4	W168-5	W168-6	W168-7	W168-8
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021	14/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021	15/01/2021
			SDG Ref	210115-27	210115-27	210115-27	210115-27	210115-27	210115-27
			Lab Sample No.(s)	23547907	23547927	23547935	23547942	23547958	23547970
			AGS Reference						
Dibromofluoromethane**	%	TM116		96.9	97.9	92.6	94.8	89.2	103
Toluene-d8**	%	TM116		96.9	95.1	93.2	95	95.2	96.2
4-Bromofluorobenzene**	%	TM116		82.9	82.6	78.8	82.9	80.1	89.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		948 M	651 M	1270 M	806 M	1310 M	368 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W168-9	W168-10	W168-11			
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20			
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)			
			Date Sampled	14/01/2021	14/01/2021	14/01/2021			
			Sample Time	.	.	.			
			Date Received	15/01/2021	15/01/2021	15/01/2021			
			SDG Ref	210115-27	210115-27	210115-27			
			Lab Sample No.(s)	23547983	23548001	23548010			
			AGS Reference						
Dibromofluoromethane**	%	TM116		101	94.8	97			
Toluene-d8**	%	TM116		97.2	94	95			
4-Bromofluorobenzene**	%	TM116		89.3	81.4	80.4			
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M			
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M			
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M			
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M			
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #			
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M			
Naphthalene	<13 µg/kg	TM116		491 M	839 M	1240 M			
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4			
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800			

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL24-1 0.70 - 0.70 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547855 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AM33-1 0.30 - 0.30 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547873 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AN23-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547829 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO27-1 0.60 - 0.60 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548024 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AO29-1 0.50 - 0.50 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547788 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ24-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548085 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ25-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548065 TM048	22/01/21	Andrzej Ferfecki	loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AQ26-1 0.20 - 0.20 SOLID 13/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548044 TM048	21/01/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-1 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547887 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-3 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547907 TM048	22/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-5 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547935 TM048	21/01/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-7 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547958 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-9 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23547983 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W168-11 0.20 - 0.20 SOLID 14/01/2021 00:00:00 15/01/2021 05:00:00 210115-27 23548010 TM048	21/01/21	Andrzej Ferfecki	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AQ25-1	Chrysotile detected. (#)	Fibre bundles in soil.	0.0083 (#)	<0.001 (#)	0.0083 (#)
Depth (m)	0.20 - 0.20					
Sample Type	SOLID					
Date Sampled	13/01/2021 00:00:00					
Date Received	15/01/2021 05:00:00					
SDG	210115-27					
Original Sample	23548065					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210115-27	**Client Reference:**	P18-669	**Report Number:**	584712
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	584671

Test Completion Dates

Lab Sample No(s)	23547855	23547865	23547873	23547879	23547829	23547841	23548024	23548034	23547788	23547917
Customer Sample Ref.	AL24-1	AL24-2	AM33-1	AM33-2	AN23-1	AN23-2	AO27-1	AO27-2	AO29-1	AO29-2
AGS Ref.										
Depth	0.70 - 0.70	1.30 - 1.30	0.30 - 0.30	1.30 - 1.30	0.20 - 0.20	1.50 - 1.50	0.60 - 0.60	1.20 - 1.20	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	22-Jan-2021		22-Jan-2021		21-Jan-2021		21-Jan-2021		22-Jan-2021	
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	20-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	20-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	22-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
PAH by GCMS	22-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	28-Jan-2021	25-Jan-2021	22-Jan-2021	22-Jan-2021
Sample description	18-Jan-2021	16-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23548085	23547819	23548065	23548075	23548044	23548052	23547887	23547896	23547907	23547927
Customer Sample Ref.	AQ24-1	AQ24-2	AQ25-1	AQ25-2	AQ26-1	AQ26-2	W168-1	W168-2	W168-3	W168-4
AGS Ref.										
Depth	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	1.50 - 1.50	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	21-Jan-2021		22-Jan-2021		21-Jan-2021		22-Jan-2021		22-Jan-2021	
Asbestos Quantification - Full			28-Jan-2021							
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	20-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	20-Jan-2021	19-Jan-2021	19-Jan-2021	20-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	21-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021	25-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021
Sample description	18-Jan-2021	18-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Lab Sample No(s)	23547935	23547942	23547958	23547970	23547983	23548001	23548010
Customer Sample Ref.	W168-5	W168-6	W168-7	W168-8	W168-9	W168-10	W168-11
AGS Ref.							
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021
Asbestos ID in Solid Samples	21-Jan-2021		21-Jan-2021		21-Jan-2021		21-Jan-2021
Cyanide Comp/Free/Total/Thiocyanate	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
EPH CWG GC (S)	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021	22-Jan-2021	19-Jan-2021	22-Jan-2021
GRO by GC-FID (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
Metals in solid samples by OES	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
PAH by GCMS	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021
pH	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021	18-Jan-2021
Phenols by HPLC (S)	25-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	25-Jan-2021	22-Jan-2021
Sample description	18-Jan-2021	18-Jan-2021	16-Jan-2021	18-Jan-2021	18-Jan-2021	16-Jan-2021	18-Jan-2021
Total Organic Carbon	22-Jan-2021	22-Jan-2021	22-Jan-2021	21-Jan-2021	22-Jan-2021	21-Jan-2021	21-Jan-2021
TPH CWG GC (S)	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021	22-Jan-2021
VOC MS (S)	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021	21-Jan-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
Office 225
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BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210127-42
Your Reference:	P18-669
Location:	Llanwern
Report No:	586164

This report has been revised and directly supersedes 585603 in its entirety.

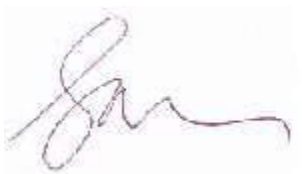
We received 18 samples on Wednesday January 27, 2021 and 18 of these samples were scheduled for analysis which was completed on Tuesday February 09, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

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

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23613950	P16-1		0.30 - 0.30	26/01/2021
23613957	P16-2		1.30 - 1.30	26/01/2021
23613928	P17-1		0.30 - 0.30	26/01/2021
23613934	P17-2		1.50 - 1.50	26/01/2021
23613939	Q17-1		0.30 - 0.30	26/01/2021
23613943	Q17-2		1.50 - 1.50	26/01/2021
23613920	Q18-1		0.30 - 0.30	26/01/2021
23613924	Q18-2		1.50 - 1.50	26/01/2021
23614011	R18-1		0.60 - 0.60	26/01/2021
23613914	R18-2		1.80 - 1.80	26/01/2021
23613985	R19-1		0.40 - 0.40	26/01/2021
23613991	R19-2		1.20 - 1.20	26/01/2021
23614001	R19-3		2.50 - 2.50	26/01/2021
23613973	R20-1		0.50 - 0.50	26/01/2021
23613979	R20-2		1.60 - 1.60	26/01/2021
23613902	V4-1		1.15 - 1.15	25/01/2021
23613963	V5-1		0.50 - 0.50	25/01/2021
23613968	V5-2		1.50 - 1.50	25/01/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23613950		23613957		23613928		23613934		23613939		23613943		23613920		23613924	
Customer Sample Reference			P16-1		P16-2		P17-1		P17-2		Q17-1		Q17-2		Q18-1		Q18-2	
AGS Reference																		
Depth (m)			0.30 - 0.30		1.30 - 1.30		0.30 - 0.30		1.50 - 1.50		0.30 - 0.30		1.50 - 1.50		0.30 - 0.30		1.50 - 1.50	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 9	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2																X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 18			X		X			X			X		X					X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 14		X							X			X							X
Total Organic Carbon	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 18		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 18			X		X			X			X		X					X	

23613902	V4-1		1.15 - 1.15	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23613979	R20-2		1.60 - 1.60	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23613973	R20-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X		X	X	
23614001	R19-3		2.50 - 2.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23613991	R19-2		1.20 - 1.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23613985	R19-1		0.40 - 0.40	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23613914	R18-2		1.80 - 1.80	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23614011	R18-1		0.60 - 0.60	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23613924	Q18-2		1.50 - 1.50	60g VOC (ALE215)	S						X								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)				23613963				23613968
			Customer Sample Reference				V5-1				V5-2
			AGS Reference								
			Depth (m)				0.50 - 0.50				1.50 - 1.50
			Container				250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
			Sample Type				S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 18					X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 9							X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 18					X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 18					X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 18						X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 18					X			X	
PAH by GCMS	All	NDPs: 0 Tests: 18					X			X	
pH	All	NDPs: 0 Tests: 18					X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 18					X			X	
Sample description	All	NDPs: 0 Tests: 14					X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 18					X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 18					X			X	
VOC MS (S)	All	NDPs: 0 Tests: 18						X			X

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23613950	P16-1	0.30 - 0.30	Grey	Sand	Stones	None
23613957	P16-2	1.30 - 1.30	Grey	Sand	Stones	N/A
23613928	P17-1	0.30 - 0.30	Black	Sandy Loam	Stones	N/A
23613934	P17-2	1.50 - 1.50	Black	Loamy Sand	Stones	None
23613939	Q17-1	0.30 - 0.30	Dark Brown	Sand	None	Stones
23613943	Q17-2	1.50 - 1.50	Grey	Sand	Stones	N/A
23613920	Q18-1	0.30 - 0.30	Dark Brown	Sandy Loam	Vegetation	Brick
23613924	Q18-2	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23614011	R18-1	0.60 - 0.60	Dark Brown	Loamy Sand	Stones	Brick
23613914	R18-2	1.80 - 1.80	Dark Brown	Sand	None	Stones
23613985	R19-1	0.40 - 0.40	Dark Brown	Sand	Stones	None
23613991	R19-2	1.20 - 1.20	Dark Brown	Sand	Stones	Brick
23614001	R19-3	2.50 - 2.50	Dark Brown	Sand	None	Stones
23613973	R20-1	0.50 - 0.50	Dark Brown	Loamy Sand	Vegetation	Brick
23613979	R20-2	1.60 - 1.60	Dark Brown	Loamy Sand	Stones	Vegetation
23613902	V4-1	1.15 - 1.15	Grey	Sand	Stones	Concrete/Aggregate
23613963	V5-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23613968	V5-2	1.50 - 1.50	Grey	Sand	Stones	N/A

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.6	10	8.9	15	9.8	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0111 M	0.0116 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0109 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0232 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		18.8 #	2.16 #	>100 #	20.3 #	22.8 #	21.9 #
pH	1 pH Units	TM133		12.4 M	12.6 M	11.1 M	11.9 M	12.5 M	12.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	6.63 M	1.59 M	2.35 M	<1 M
Arsenic	<0.6 mg/kg	TM181		78.6 M	<6 M	<6 M	<6 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.628 M	0.619 M	0.568 M	<0.2 M	0.685 M
Chromium	<0.9 mg/kg	TM181		378 M	546 M	123 M	506 M	522 M	426 M
Copper	<1.4 mg/kg	TM181		54.4 M	22.5 M	15.7 M	<14 M	16.3 M	28.9 M
Iron	<1000 mg/kg	TM181		144000 #	127000 #	39700 #	104000 #	139000 #	114000 #
Lead	<0.7 mg/kg	TM181		55.2 M	10.1 M	37.2 M	<7 M	26.4 M	25 M
Manganese	<0.13 mg/kg	TM181		93900 M	27400 M	8480 M	21400 M	24900 M	28600 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		50.8 M	8.48 M	8.82 M	<2 M	12.6 M	14.9 M
Selenium	<1 mg/kg	TM181		71.3 #	12.7 #	<10 #	<10 #	19 #	14.7 #
Vanadium	<0.2 mg/kg	TM181		416 #	473 #	118 #	451 #	416 #	475 #
Zinc	<1.9 mg/kg	TM181		95.3 M	51.7 M	161 M	39.1 M	54.8 M	106 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.1	14	7.7	17	17	7.4
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	15.6 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0108 M	0.0117 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.65 #	49.3 #	7.29 #	8.69 #	4.53 #	5.74 #
pH	1 pH Units	TM133		10.5 M	11.4 M	11.1 M	10.9 M	9.86 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		13.8 M	6.15 M	9.32 M	12.1 M	14.7 M	7.6 M
Cadmium	<0.02 mg/kg	TM181		0.687 M	0.882 M	0.432 M	0.221 M	1.27 M	0.261 M
Chromium	<0.9 mg/kg	TM181		103 M	61.5 M	58.1 M	45.8 M	21 M	32 M
Copper	<1.4 mg/kg	TM181		21.4 M	14.3 M	22.1 M	32.4 M	22.9 M	14.3 M
Iron	<1000 mg/kg	TM181		77200 #	104000 #	66600 #	33700 #	160000 #	25700 #
Lead	<0.7 mg/kg	TM181		73.3 M	55.3 M	52.2 M	29.8 M	182 M	18.2 M
Manganese	<0.13 mg/kg	TM181		10600 M	5430 M	4170 M	2950 M	5620 M	2130 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		21.7 M	12.7 M	20.2 M	24.4 M	12.5 M	14.2 M
Selenium	<1 mg/kg	TM181		10.1 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		243 #	113 #	95.3 #	61.3 #	82.8 #	72.5 #
Zinc	<1.9 mg/kg	TM181		254 M	137 M	137 M	48.6 M	461 M	55.5 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		N/A					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	7.3	16	9.5	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0108 M	<0.01 M	0.0111 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		22.6 #	2.17 #	51.9 #	18.3 #	76.2 #	70.9 #
pH	1 pH Units	TM133		11.3 M	10.9 M	11.1 M	12.4 M	11.2 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	7.83 M	<1 M	4.43 M
Arsenic	<0.6 mg/kg	TM181		10.8 M	21.4 M	10 M	18.1 M	<6 M	8.39 M
Cadmium	<0.02 mg/kg	TM181		0.244 M	0.956 M	0.372 M	0.425 M	0.544 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		30 M	101 M	211 M	411 M	151 M	443 M
Copper	<1.4 mg/kg	TM181		16.4 M	38.4 M	22.6 M	63.8 M	22.6 M	27.2 M
Iron	<1000 mg/kg	TM181		35900 #	103000 #	121000 #	288000 #	59900 #	93500 #
Lead	<0.7 mg/kg	TM181		26.8 M	107 M	80.6 M	93.9 M	26.2 M	29.7 M
Manganese	<0.13 mg/kg	TM181		2790 M	7530 M	9260 M	25800 M	11900 M	26700 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		16.7 M	22.9 M	21.7 M	54.2 M	8.64 M	16 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	18.2 #	<10 #	22.3 #
Vanadium	<0.2 mg/kg	TM181		68.5 #	130 #	370 #	651 #	210 #	1020 #
Zinc	<1.9 mg/kg	TM181		108 M	366 M	188 M	378 M	125 M	226 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					N/A		
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.4	82.5	84.3	85.1	84.7	79.4
Acenaphthene-d10 % recovery**	%	TM218		87.4	83.1	87.1	84.9	85.7	82
Phenanthrene-d10 % recovery**	%	TM218		86.6	82.1	81.6	83.4	90	79.1
Chrysene-d12 % recovery**	%	TM218		78.3	75.4	66.6	71.1	89.4	79.3
Perylene-d12 % recovery**	%	TM218		76.9	75	52.6	62.5	87.5	80.8
Naphthalene	<9 µg/kg	TM218		776 M	386 M	3080 M	2440 M	2760 M	24100 M
Acenaphthylene	<12 µg/kg	TM218		367 M	262 M	<12 M	468 M	607 M	14100 M
Acenaphthene	<8 µg/kg	TM218		14.5 M	19.7 M	127 M	85.1 M	76.1 M	880 M
Fluorene	<10 µg/kg	TM218		83.7 M	153 M	941 M	644 M	313 M	16500 M
Phenanthrene	<15 µg/kg	TM218		2430 M	3040 M	6200 M	3590 M	3390 M	60800 M
Anthracene	<16 µg/kg	TM218		432 M	1220 M	1560 M	677 M	747 M	20900 M
Fluoranthene	<17 µg/kg	TM218		1780 M	3660 M	8910 M	3030 M	5540 M	58300 M
Pyrene	<15 µg/kg	TM218		1130 M	2400 M	6700 M	2020 M	4030 M	39100 M
Benz(a)anthracene	<14 µg/kg	TM218		563 M	1560 M	<14 M	1010 M	2690 M	20300 M
Chrysene	<10 µg/kg	TM218		460 M	1320 M	3090 M	974 M	2470 M	16900 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		386 M	1530 M	4240 M	1160 M	2560 M	20400 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		189 M	562 M	<14 M	339 M	1240 M	7620 M
Benzo(a)pyrene	<15 µg/kg	TM218		349 M	1060 M	<15 M	670 M	2310 M	15300 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		285 M	859 M	1750 M	527 M	1940 M	12200 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		56.2 M	157 M	391 M	102 M	427 M	2120 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		225 M	653 M	<24 M	366 M	1880 M	10000 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9530	18800	37000	18100	33000	340000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90	84.3	78.3	85.7	83.4	86.2
Acenaphthene-d10 % recovery**	%	TM218		90.8	84.6	78.9	87.4	83.8	87.4
Phenanthrene-d10 % recovery**	%	TM218		90.1	84.8	77.5	78.5	85.7	86.1
Chrysene-d12 % recovery**	%	TM218		80.5	75.6	72	40.3	78.3	76.6
Perylene-d12 % recovery**	%	TM218		80.8	68.3	70.4	20.6	74.9	76.8
Naphthalene	<9 µg/kg	TM218		286 M	4560 M	269 M	126 M	178 M	19.5 M
Acenaphthylene	<12 µg/kg	TM218		77.7 M	1980 M	<60 M	23 M	35.8 M	<12 M
Acenaphthene	<8 µg/kg	TM218		23.6 M	405 M	102 M	27.9 M	15.9 M	<8 M
Fluorene	<10 µg/kg	TM218		93.3 M	4350 M	176 M	38.6 M	37.2 M	<10 M
Phenanthrene	<15 µg/kg	TM218		498 M	14800 M	974 M	209 M	282 M	46.7 M
Anthracene	<16 µg/kg	TM218		120 M	3960 M	241 M	52 M	60.2 M	<16 M
Fluoranthene	<17 µg/kg	TM218		685 M	15300 M	1340 M	244 M	332 M	41.2 M
Pyrene	<15 µg/kg	TM218		499 M	12900 M	1140 M	195 M	270 M	31.8 M
Benz(a)anthracene	<14 µg/kg	TM218		307 M	8840 M	922 M	100 M	182 M	24.2 M
Chrysene	<10 µg/kg	TM218		257 M	7310 M	789 M	88.7 M	174 M	24.8 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		245 M	9840 M	676 M	98.2 M	281 M	22.5 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		140 M	3590 M	315 M	37.7 M	83.3 M	<14 M
Benzo(a)pyrene	<15 µg/kg	TM218		256 M	6160 M	635 M	53 M	160 M	20.2 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		231 M	5420 M	410 M	39.2 M	158 M	<18 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		40.2 M	1130 M	<115 M	<23 M	29.9 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		185 M	3920 M	360 M	29.4 M	123 M	<24 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3950	104000	8350	1360	2400	231

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.1	84.7	79.2	87.1	82.6	87.3
Acenaphthene-d10 % recovery**	%	TM218		84.2	87.1	80.6	89.2	84.4	86.4
Phenanthrene-d10 % recovery**	%	TM218		86.1	86.9	78.9	86.1	83.3	82.8
Chrysene-d12 % recovery**	%	TM218		83.7	78.9	73	76.6	69.9	68.4
Perylene-d12 % recovery**	%	TM218		82	81.4	71.4	76.2	58.9	60.5
Naphthalene	<9 µg/kg	TM218		67.4 M	1790 M	800 M	409 M	817 M	573 M
Acenaphthylene	<12 µg/kg	TM218		18.3 M	330 M	183 M	150 M	183 M	48.3 M
Acenaphthene	<8 µg/kg	TM218		<8 M	84.5 M	64.2 M	46.3 M	32.2 M	28.6 M
Fluorene	<10 µg/kg	TM218		21.6 M	361 M	192 M	195 M	170 M	94.8 M
Phenanthrene	<15 µg/kg	TM218		156 M	2500 M	1350 M	1440 M	1500 M	559 M
Anthracene	<16 µg/kg	TM218		35.2 M	599 M	289 M	292 M	355 M	92.3 M
Fluoranthene	<17 µg/kg	TM218		221 M	3120 M	1980 M	2260 M	2120 M	576 M
Pyrene	<15 µg/kg	TM218		161 M	2190 M	1380 M	1740 M	1580 M	494 M
Benz(a)anthracene	<14 µg/kg	TM218		104 M	1240 M	939 M	1250 M	1010 M	303 M
Chrysene	<10 µg/kg	TM218		102 M	1160 M	818 M	1280 M	929 M	321 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		78.3 M	859 M	1150 M	1640 M	1580 M	566 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		34.8 M	540 M	367 M	733 M	455 M	169 M
Benzo(a)pyrene	<15 µg/kg	TM218		86.7 M	992 M	734 M	1310 M	789 M	278 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		73.3 M	901 M	563 M	1200 M	778 M	277 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	149 M	<115 M	237 M	163 M	60.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		78.1 M	706 M	479 M	1010 M	603 M	228 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1240	17500	11300	15200	13100	4670

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		102	61.5 4	2.8 4	15.5 4	9.6 4	77.2
Aliphatics >C5-C6	<10 µg/kg	TM089		35	32.2 4	<10 4	23.4 4	13.3 4	26.7
Aliphatics >C6-C8	<10 µg/kg	TM089		42.7	72.2 4	19.8 4	53.8 4	30 4	45.2
Aliphatics >C8-C10	<10 µg/kg	TM089		93	54.4 4	<10 4	38.6 4	15.5 4	49.9
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	6160	7940	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1640	<1000	9650	9850	2100	2800
Aliphatics >C16-C21	<1000 µg/kg	TM414		5250	3980	9640	7450	11800	6860
Aliphatics >C21-C35	<1000 µg/kg	TM414		38900	31300	23500	36500	118000	78500
Aliphatics >C35-C44	<1000 µg/kg	TM414		9520	6170	4550	8510	24400	56300
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		56000	42600	53500	70300	157000	145000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		89800	62700	140000	150000	223000	391000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10 4	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	16.7 4	<10 4	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		61.3	35.5 4	<10 4	25.7 4	<10 4	33.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1400	<1000	1750	4050	1760	9430
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3020	<1000	13600	12900	2250	21000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		13700	6530	23900	26700	16000	76100
Aromatics > EC21-EC35	<1000 µg/kg	TM414		14700	11700	44500	34500	41900	126000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	2690	1350	4040	13100
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1710
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		33800	20100	86400	79500	65900	246000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		90000	62900	140000	150000	223000	391000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		171	159 4	<50 4	116 4	58.8 4	122
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		61.3	52.2 4	<50 4	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		232	211 4	<20 4	116 4	58.8 4	122

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		106	5.4 4	11.7 4	80.9	74.3	81.5
Aliphatics >C5-C6	<10 µg/kg	TM089		26.9	19.9 4	<10 4	10.9	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		37.7	53.8 4	10.8 4	52	<10	16.2
Aliphatics >C8-C10	<10 µg/kg	TM089		40.9	35.1 4	<10 4	252	<10	32.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	5100	<1000	4650	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	11200	3770	19700	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		3810	29800	9540	81100	6890	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		16100	112000	31000	241000	25800	<1000
Aliphatics >C35-C44	<1000 µg/kg	TM414		5060	35000	7110	34800	4970	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		26300	193000	52200	381000	38800	<5000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		44800	382000	92700	429000	52700	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10 4	10.9	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10 4	10.9	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		28	23.4 4	<10 4	168	<10	21.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	5240	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	17800	3550	1070	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		3110	54100	8580	2380	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		13700	105000	26100	41900	11900	<1000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1060	5760	1950	2170	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		18500	188000	40500	47700	13900	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		44900	382000	92700	429000	52700	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		106	109 4	<50 4	315	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50 4	190	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		106	109 4	<20 4	505	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		83.2	82.9	26.1 4	57.1 4	29.3 4	13.3 4
Aliphatics >C5-C6	<10 µg/kg	TM089		20.2	17.2	72 4	21.1 4	24.4 4	57.6 4
Aliphatics >C6-C8	<10 µg/kg	TM089		25.2	20.5	223 4	37.7 4	51.1 4	177 4
Aliphatics >C8-C10	<10 µg/kg	TM089		60.5	18.3	96 4	21.1 4	30 4	73.5 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1590	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	3340	9340	6470	2480	9220
Aliphatics >C16-C21	<1000 µg/kg	TM414		5610	12700	22000	33700	31700	73500
Aliphatics >C21-C35	<1000 µg/kg	TM414		21500	47700	100000	345000	38100	58300
Aliphatics >C35-C44	<1000 µg/kg	TM414		3090	17300	31200	140000	8420	21200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		31100	81200	164000	525000	81200	163000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		40300	129000	215000	613000	144000	283000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	30 4	<10 4	<10 4	56.5 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	58.8 4	<10 4	12.2 4	52 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		40.3	11.9	63.6 4	14.4 4	20 4	49.7 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	1830	<1000	<1000	<1000	8770
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1940	7130	3980	3650	13300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	8290	10100	9830	12500	35200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		7870	31400	30800	70100	44000	60600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	4020	1330	3270	1660	2360
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1090	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		9200	47500	50200	87600	62500	120000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		40500	129000	215000	613000	144000	284000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		106	56.1	391 4	79.9 4	105 4	308 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	152 4	<50 4	<50 4	158 4
GRO >C5-C10	<20 µg/kg	TM089		106	56.1	544 4	79.9 4	105 4	467 4

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613950	23613957	23613928	23613934	23613939	23613943
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	108	106	105	94.9	106
Toluene-d8**	%	TM116		96.4	97.4	94.6	97.7	87.8	97.1
4-Bromofluorobenzene**	%	TM116		93.3	99.8	83.8	92.2	73.6	96.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<2000 M	<2000 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<1800 M	<1800 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<1400 M	<1400 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<800 M	<800 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<2000 #	<2000 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<2000 M	<2000 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<2600 M	<2600 M	443 M	547 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<4	<4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<8000	<8000	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q18-1	Q18-2	R18-1	R18-2	R19-1	R19-2
			Depth (m)	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.40 - 0.40	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021	26/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23613920	23613924	23614011	23613914	23613985	23613991
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	106	105	119	104	119
Toluene-d8**	%	TM116		98.1	97.4	94.9	96.8	97.8	97.1
4-Bromofluorobenzene**	%	TM116		93.5	92.3	86.7	83.9	96.3	93.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<2000 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<1800 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<1400 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<800 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<2000 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<2000 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<2600 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<8000	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
			Depth (m)	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	26/01/2021	26/01/2021	26/01/2021	25/01/2021	25/01/2021	25/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			SDG Ref	210127-42	210127-42	210127-42	210127-42	210127-42	210127-42
			Lab Sample No.(s)	23614001	23613973	23613979	23613902	23613963	23613968
			AGS Reference						
Dibromofluoromethane**	%	TM116		110	108	94.5	106	101	102
Toluene-d8**	%	TM116		96.6	97.4	91.5	99.3	95.1	94.8
4-Bromofluorobenzene**	%	TM116		97.4	99	76.8	89.9	76.5	79.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	168 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	550 M	363 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref.	P16-1	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Depth (m)	0.30 - 0.30										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613950										
Method Number	TM048										
Cust. Sample Ref.	P17-1	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.30 - 0.30										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613928										
Method Number	TM048										
Cust. Sample Ref.	Q17-1	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.30 - 0.30										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613939										
Method Number	TM048										
Cust. Sample Ref.	Q18-1	03/02/2021	James Richards	Fibre bundle in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.30 - 0.30										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613920										
Method Number	TM048										
Cust. Sample Ref.	R18-1	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	0.60 - 0.60										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23614011										
Method Number	TM048										
Cust. Sample Ref.	R19-2	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.20 - 1.20										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613991										
Method Number	TM048										
Cust. Sample Ref.	R20-2	03/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected
Depth (m)	1.60 - 1.60										
Sample Type	SOLID										
Date Sampled	26/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613979										
Method Number	TM048										
Cust. Sample Ref.	V4-1	03/02/2021	James Richards	Fibre bundle in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Depth (m)	1.15 - 1.15										
Sample Type	SOLID										
Date Sampled	25/01/2021 00:00:00										
Date Received	27/01/2021 05:00:00										
SDG	210127-42										
Original Sample	23613902										
Method Number	TM048										

Validated

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	V5-2 1.50 - 1.50 SOLID 25/01/2021 00:00:00 27/01/2021 05:00:00 210127-42 23613968 TM048	03/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	Q18-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.30 - 0.30					
Sample Type	SOLID					
Date Sampled	26/01/2021 00:00:00					
Date Received	27/01/2021 05:00:00					
SDG	210127-42					
Original Sample	23613920					
Method Number	TM304					
Cust. Sample Ref.	V4-1	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	1.15 - 1.15					
Sample Type	SOLID					
Date Sampled	25/01/2021 00:00:00					
Date Received	27/01/2021 05:00:00					
SDG	210127-42					
Original Sample	23613902					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210127-42	**Client Reference:**	P18-669	**Report Number:**	586164
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	585603

Test Completion Dates

Lab Sample No(s)	23613950	23613957	23613928	23613934	23613939	23613943	23613920	23613924	23614011	23613914
Customer Sample Ref.	P16-1	P16-2	P17-1	P17-2	Q17-1	Q17-2	Q18-1	Q18-2	R18-1	R18-2
AGS Ref.										
Depth	0.30 - 0.30	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
Asbestos ID in Solid Samples	03-Feb-2021		03-Feb-2021		03-Feb-2021		03-Feb-2021		03-Feb-2021	
Asbestos Quantification - Full							09-Feb-2021			
Cyanide Comp/Free/Total/Thiocyanate	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
EPH CWG GC (S)	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
GRO by GC-FID (S)	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
Metals in solid samples by OES	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
PAH by GCMS	29-Jan-2021	29-Jan-2021	02-Feb-2021	02-Feb-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	02-Feb-2021	29-Jan-2021	02-Feb-2021
pH	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	28-Jan-2021
Phenols by HPLC (S)	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
Sample description	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021
Total Organic Carbon	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021
TPH CWG GC (S)	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
VOC MS (S)	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021

Lab Sample No(s)	23613985	23613991	23614001	23613973	23613979	23613902	23613963	23613968
Customer Sample Ref.	R19-1	R19-2	R19-3	R20-1	R20-2	V4-1	V5-1	V5-2
AGS Ref.								
Depth	0.40 - 0.40	1.20 - 1.20	2.50 - 2.50	0.50 - 0.50	1.60 - 1.60	1.15 - 1.15	0.50 - 0.50	1.50 - 1.50
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021	01-Feb-2021
Asbestos ID in Solid Samples		03-Feb-2021			03-Feb-2021	03-Feb-2021		03-Feb-2021
Asbestos Quantification - Full						09-Feb-2021		
Cyanide Comp/Free/Total/Thiocyanate	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021
EPH CWG GC (S)	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
GRO by GC-FID (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
Metals in solid samples by OES	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
PAH by GCMS	02-Feb-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	02-Feb-2021	02-Feb-2021
pH	28-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	28-Jan-2021	29-Jan-2021
Phenols by HPLC (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	29-Jan-2021	03-Feb-2021	03-Feb-2021
Sample description	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021	27-Jan-2021
Total Organic Carbon	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
TPH CWG GC (S)	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
VOC MS (S)	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	02-Feb-2021	02-Feb-2021	03-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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CH5 3US
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	16 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210129-39
Your Reference:	P18-669
Location:	Llanwern
Report No:	586994

This report has been revised and directly supersedes 586360 in its entirety.

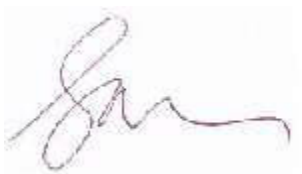
We received 19 samples on Friday January 29, 2021 and 19 of these samples were scheduled for analysis which was completed on Tuesday February 16, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23630284	AG30-1		0.50 - 0.50	28/01/2021
23630288	AG30-2		1.30 - 1.30	28/01/2021
23630297	AG31-1		0.30 - 0.30	28/01/2021
23630306	AG31-2		1.20 - 1.20	28/01/2021
23630255	AH29-1		0.30 - 0.30	28/01/2021
23630262	AH29-2		1.60 - 1.60	28/01/2021
23630239	AH30-1		0.20 - 0.20	28/01/2021
23630248	AH30-2		1.40 - 1.40	28/01/2021
23630211	AH31-1		0.50 - 0.50	28/01/2021
23630215	AH31-2		1.70 - 1.70	28/01/2021
23630227	AI30-1		0.30 - 0.30	28/01/2021
23630232	AI30-2		1.80 - 1.80	28/01/2021
23630219	AI31-1		0.50 - 0.50	28/01/2021
23630223	AI31-2		1.50 - 1.50	28/01/2021
23630206	T6-1		0.50 - 0.50	27/01/2021
23630267	T6-2		0.00 - 1.50	27/01/2021
23630280	T6-3		2.20 - 2.20	27/01/2021
23630271	T7-1		0.50 - 0.50	27/01/2021
23630275	T7-2		1.20 - 1.20	27/01/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23630284	AG30-1		0.50 - 0.50	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
							1kg TUB with Handle (ALE260)	S
			23630288	AG30-2		1.30 - 1.30	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630297	AG31-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630306	AG31-2		1.20 - 1.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630255	AH29-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630262	AH29-2		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630239	AH30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23630248	AH30-2		1.40 - 1.40	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19	X				X			X		X		X		X		X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10			X				X				X				X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19		X			X		X			X		X			X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
PAH by GCMS	All	NDPs: 0 Tests: 18				X		X			X		X			X		X		X
pH	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
Sample description	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
Total Organic Carbon	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 19	X			X		X			X		X			X		X		X
VOC MS (S)	All	NDPs: 0 Tests: 19		X			X		X			X		X			X		X	

23630267	T6-2		0.00 - 1.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23630206	T6-1		0.50 - 0.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X																								
23630223	AI31-2		1.50 - 1.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X																								
23630219	AI31-1		0.50 - 0.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23630232	AI30-2		1.80 - 1.80	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X		X																		
23630227	AI30-1		0.30 - 0.30	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23630215	AH31-2		1.70 - 1.70	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
				1kg TUB with Handle (ALE260)	S				X																								
23630211	AH31-1		0.50 - 0.50	60g VOC (ALE215)	S												X																X
				250g Amber Jar (ALE210)	S		X						X		X				X		X		X		X		X		X		X		
23630248	AH30-2		1.40 - 1.40	60g VOC (ALE215)	S												X																X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

- X Test
- N No Determination Possible

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

Lab Sample No(s)			23630280			23630271			23630275	
Customer Sample Reference			T6-3			T7-1			T7-2	
AGS Reference										
Depth (m)			2.20 - 2.20			0.50 - 0.50			1.20 - 1.20	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	X			X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19			X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 19		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 18		X			X		X	
pH	All	NDPs: 0 Tests: 19		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19		X			X		X	
Sample description	All	NDPs: 0 Tests: 19		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 19		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 19			X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23630284	AG30-1	0.50 - 0.50	Black	Sand	Stones	None
23630288	AG30-2	1.30 - 1.30	Dark Brown	Sand	Stones	None
23630297	AG31-1	0.30 - 0.30	Dark Brown	Sand	Stones	Vegetation
23630306	AG31-2	1.20 - 1.20	Dark Brown	Loamy Sand	Stones	N/A
23630255	AH29-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	Vegetation
23630262	AH29-2	1.60 - 1.60	Dark Brown	Sand	Stones	None
23630239	AH30-1	0.20 - 0.20	Dark Brown	Sandy Clay	Stones	Vegetation
23630248	AH30-2	1.40 - 1.40	Dark Brown	Sand	Stones	Vegetation
23630211	AH31-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Fibres
23630215	AH31-2	1.70 - 1.70	Dark Brown	Sandy Loam	Stones	N/A
23630227	AI30-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23630232	AI30-2	1.80 - 1.80	Dark Brown	Sand	Stones	None
23630219	AI31-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	N/A
23630223	AI31-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23630206	T6-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23630267	T6-2	0.00 - 1.50	Black	Sand	Stones	None
23630280	T6-3	2.20 - 2.20	Black	Sand	Stones	None
23630271	T7-1	0.50 - 0.50	Black	Chalk	Stones	Vegetation
23630275	T7-2	1.20 - 1.20	Black	N/A	Coal fragments	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	9.5	6.7	11	13	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		76 #	4.76 #	3.53 #	0.436 #	13.8 #	13.8 #
pH	1 pH Units	TM133		9.4 M	8.91 M	8.98 M	7.94 M	10.6 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		14 M	6.07 M	<6 M	16.2 M	8.79 M	6.58 M
Cadmium	<0.02 mg/kg	TM181		2.04 M	0.584 M	0.33 M	0.927 M	1.77 M	1.52 M
Chromium	<0.9 mg/kg	TM181		15.6 M	20.5 M	13.2 M	26.1 M	158 M	615 M
Copper	<1.4 mg/kg	TM181		31.4 M	22 M	<14 M	27 M	34.5 M	15.1 M
Iron	<1000 mg/kg	TM181			40100 #			151000 #	169000 #
Lead	<0.7 mg/kg	TM181		45.7 M	13.1 M	13 M	31 M	58.1 M	24.8 M
Manganese	<0.13 mg/kg	TM181		4270 M	1140 M	3600 M	1900 M	10900 M	38400 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		32 M	34.5 M	2.79 M	61 M	23.6 M	12.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	18 #
Vanadium	<0.2 mg/kg	TM181		65.5 #	34.1 #	17.2 #	57.8 #	216 #	483 #
Zinc	<1.9 mg/kg	TM181		129 M	56.5 M	37.8 M	102 M	204 M	72.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	11	9.8	12	12	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.28 #	7.6 #	11.3 #	6.91 #	3.86 #	8.36 #
pH	1 pH Units	TM133		8.63 M	9.7 M	9.75 M	10.5 M	9.97 M	10.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	2.13 M
Arsenic	<0.6 mg/kg	TM181		10.3 M	65 M	9.28 M	7.6 M	6.78 M	<6 M
Cadmium	<0.02 mg/kg	TM181		0.419 M	4.47 M	0.902 M	0.626 M	0.861 M	0.689 M
Chromium	<0.9 mg/kg	TM181		23.4 M	397 M	52.9 M	39.1 M	144 M	50.7 M
Copper	<1.4 mg/kg	TM181		19.2 M	220 M	20.5 M	27.7 M	14.4 M	21.8 M
Iron	<1000 mg/kg	TM181		27800 #	397000 #	40900 #	40600 #	82800 #	44500 #
Lead	<0.7 mg/kg	TM181		27.5 M	95.3 M	48.9 M	33 M	15.9 M	50.1 M
Manganese	<0.13 mg/kg	TM181		1180 M	34200 M	3580 M	3130 M	13500 M	2670 M
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M
Nickel	<0.2 mg/kg	TM181		24.1 M	168 M	17.5 M	19.5 M	14.1 M	12.7 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	11.8 #	<10 #
Vanadium	<0.2 mg/kg	TM181		28.7 #	469 #	96.8 #	89.8 #	370 #	73 #
Zinc	<1.9 mg/kg	TM181		135 M	514 M	124 M	90.6 M	77.7 M	183 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304							0.0018 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304							<0.001 #
Additional Asbestos Components (Using TM048)		TM304							None #
Analysts Comments		TM304							N/A
Asbestos Quantification - Total - %	<0.001 %	TM304							0.0018 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	14	5.9	4.9	10	5.2
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 #
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0116 M	0.0106 M	<0.01 M	0.0112 M	<0.01 #
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #
Soil Organic Matter (SOM)	<0.35 %	TM132		12.8 #	10.7 #	6.71 #	10.2 #	4.14 #	1.42 #
pH	1 pH Units	TM133		11.3 M	11.2 M	12.6 M	12.8 M	12.7 M	12.5 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Arsenic	<0.6 mg/kg	TM181		8.19 M	7.92 M	<6 M	<6 M	<6 M	<6 #
Cadmium	<0.02 mg/kg	TM181		1.98 M	2.13 M	1.65 M	1.27 M	1.51 M	1.03 #
Chromium	<0.9 mg/kg	TM181		145 M	159 M	549 M	461 M	550 M	565 #
Copper	<1.4 mg/kg	TM181		18.4 M	15 M	17.7 M	20.3 M	26.5 M	<14 #
Iron	<1000 mg/kg	TM181		119000 #	137000 #	157000 #	153000 #	126000 #	149000 #
Lead	<0.7 mg/kg	TM181		152 M	147 M	<7 M	<7 M	25.3 M	9.34 #
Manganese	<0.13 mg/kg	TM181		18700 M	12800 M	24500 M	31200 M	27100 M	37000 #
Mercury	<0.1 mg/kg	TM181		<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 M	<1.4 #
Nickel	<0.2 mg/kg	TM181		16.4 M	14.7 M	8.24 M	14.7 M	10.5 M	6.07 #
Selenium	<1 mg/kg	TM181		12.4 #	<10 #	13.9 #	20.3 #	15.1 #	22.8 #
Vanadium	<0.2 mg/kg	TM181		422 #	310 #	632 #	636 #	631 #	503 #
Zinc	<1.9 mg/kg	TM181		459 M	415 M	28.9 M	45.6 M	49.6 M	52.7 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

		Customer Sample Ref.	T7-2
		Depth (m)	1.20 - 1.20
		Sample Type	Soil/Solid (S)
		Date Sampled	27/01/2021
		Sample Time	.
		Date Received	29/01/2021
		SDG Ref	210129-39
		Lab Sample No.(s)	23630275
		AGS Reference	
Component	**LOD/Units**	**Method**	
Moisture Content Ratio (% of as received sample)	%	PM024	9
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 #
Phenol	<0.01 mg/kg	TM062 (S)	0.011
Cresols	<0.01 mg/kg	TM062 (S)	<0.01
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035
Soil Organic Matter (SOM)	<0.35 %	TM132	90.3 #
pH	1 pH Units	TM133	12.1
Cyanide, Total	<1 mg/kg	TM153	<1
Arsenic	<0.6 mg/kg	TM181	<6
Cadmium	<0.02 mg/kg	TM181	0.885
Chromium	<0.9 mg/kg	TM181	297
Copper	<1.4 mg/kg	TM181	<14
Iron	<1000 mg/kg	TM181	95000
Lead	<0.7 mg/kg	TM181	<7
Manganese	<0.13 mg/kg	TM181	18600 #
Mercury	<0.1 mg/kg	TM181	<1.4
Nickel	<0.2 mg/kg	TM181	6.66
Selenium	<1 mg/kg	TM181	11.7
Vanadium	<0.2 mg/kg	TM181	246
Zinc	<1.9 mg/kg	TM181	66

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2	AH30-1
			Depth (m)	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630288	23630297	23630306	23630255	23630262	23630239
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.6	80.2	83.4	77.8	81.2	82.4
Acenaphthene-d10 % recovery**	%	TM218		82.3	80.8	82.9	80.3	83.1	84
Phenanthrene-d10 % recovery**	%	TM218		81	78.4	81.5	85.4	83.8	85.4
Chrysene-d12 % recovery**	%	TM218		72	71.3	77	89.8	74.9	80.1
Perylene-d12 % recovery**	%	TM218		71.7	70	78.6	86.4	75.5	76.6
Naphthalene	<9 µg/kg	TM218		39.1 M	36 M	<9 M	201 M	182 M	12.5 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	24.4 M	<12 M	121 M	45.2 M	<12 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	20.5 M	59.9 M	<8 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	60.3 M	52.5 M	<10 M
Phenanthrene	<15 µg/kg	TM218		24.1 M	85.8 M	<15 M	510 M	362 M	89.2 M
Anthracene	<16 µg/kg	TM218		<16 M	26.4 M	<16 M	156 M	87.6 M	27 M
Fluoranthene	<17 µg/kg	TM218		21.2 M	158 M	<17 M	1030 M	590 M	174 M
Pyrene	<15 µg/kg	TM218		17.1 M	127 M	<15 M	831 M	520 M	129 M
Benz(a)anthracene	<14 µg/kg	TM218		<14 M	89.9 M	<14 M	612 M	318 M	84.7 M
Chrysene	<10 µg/kg	TM218		14.3 M	103 M	<10 M	671 M	333 M	93.1 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		23.7 M	158 M	<15 M	1100 M	536 M	124 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<14 M	46.6 M	<14 M	305 M	189 M	39.1 M
Benzo(a)pyrene	<15 µg/kg	TM218		<15 M	79.7 M	<15 M	604 M	333 M	68.3 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		<18 M	78.6 M	<18 M	519 M	317 M	60.3 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	<23 M	<23 M	116 M	50.4 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<24 M	72.8 M	<24 M	498 M	266 M	57.4 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		140	1090	<118	7360	4240	959

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2	AI31-1
			Depth (m)	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630248	23630211	23630215	23630227	23630232	23630219
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.7	81.7	80.1	84.2	78.5	82.7
Acenaphthene-d10 % recovery**	%	TM218		80.7	82.3	80	82.8	82.1	81.5
Phenanthrene-d10 % recovery**	%	TM218		80.3	82.1	78.5	80.4	85.8	79.4
Chrysene-d12 % recovery**	%	TM218		82.6	79.3	73.5	80.2	79	76.6
Perylene-d12 % recovery**	%	TM218		80.8	77	72.2	81	72.8	76.2
Naphthalene	<9 µg/kg	TM218		39.9 M	130 M	62.2 M	127 M	649 M	396 M
Acenaphthylene	<12 µg/kg	TM218		26.5 M	102 M	82.2 M	101 M	560 M	217 M
Acenaphthene	<8 µg/kg	TM218		<8 M	12.1 M	11.4 M	14.1 M	67.5 M	50.5 M
Fluorene	<10 µg/kg	TM218		<10 M	63.6 M	17.2 M	107 M	455 M	169 M
Phenanthrene	<15 µg/kg	TM218		45.3 M	771 M	194 M	703 M	4260 M	1590 M
Anthracene	<16 µg/kg	TM218		<16 M	153 M	70.2 M	133 M	965 M	486 M
Fluoranthene	<17 µg/kg	TM218		80.1 M	1250 M	520 M	992 M	6720 M	2880 M
Pyrene	<15 µg/kg	TM218		69.5 M	901 M	371 M	737 M	4720 M	2140 M
Benz(a)anthracene	<14 µg/kg	TM218		52.1 M	555 M	289 M	406 M	2830 M	1310 M
Chrysene	<10 µg/kg	TM218		55.2 M	526 M	267 M	356 M	2360 M	1190 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		91.4 M	814 M	449 M	607 M	3870 M	1910 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		29.1 M	261 M	149 M	206 M	1220 M	642 M
Benzo(a)pyrene	<15 µg/kg	TM218		56.9 M	493 M	298 M	377 M	2310 M	1220 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		69.2 M	464 M	324 M	376 M	2310 M	1120 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	89.7 M	67.3 M	67.2 M	340 M	219 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		70.2 M	407 M	275 M	313 M	1710 M	961 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		685	7000	3450	5620	35300	16500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-2	T6-1	T6-2	T6-3	T7-1	T7-2
			Depth (m)	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50	1.20 - 1.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630223	23630206	23630267	23630280	23630271	23630275
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		83.5	79.4	80.6	79	77.1	79.9
Acenaphthene-d10 % recovery**	%	TM218		81	84.9	80.9	78.9	77.9	82.7
Phenanthrene-d10 % recovery**	%	TM218		80.7	88.4	82.9	81.3	80.9	80.6
Chrysene-d12 % recovery**	%	TM218		86	79.1	82	80.3	84.7	72.4
Perylene-d12 % recovery**	%	TM218		80.8	76.1	78.9	87.9	84.2	61.5
Naphthalene	<9 µg/kg	TM218		747 M	141 M	99.3 M	182 M	188 #	922 #
Acenaphthylene	<12 µg/kg	TM218		522 M	<12 M	<12 M	13.6 M	53.7 #	263 #
Acenaphthene	<8 µg/kg	TM218		104 M	98 M	70.1 M	86.5 M	<8 #	62.6 #
Fluorene	<10 µg/kg	TM218		655 M	69.5 M	38 M	63.6 M	14.1 #	257 #
Phenanthrene	<15 µg/kg	TM218		3700 M	841 M	562 M	753 M	334 #	1460 #
Anthracene	<16 µg/kg	TM218		820 M	169 M	104 M	119 M	87 #	336 #
Fluoranthene	<17 µg/kg	TM218		4860 M	1610 M	1220 M	1400 M	535 #	1740 #
Pyrene	<15 µg/kg	TM218		3510 M	1520 M	1190 M	1310 M	397 #	1240 #
Benz(a)anthracene	<14 µg/kg	TM218		2050 M	1190 M	918 M	1070 M	279 #	666 #
Chrysene	<10 µg/kg	TM218		2070 M	1220 M	1020 M	1090 M	304 #	673 #
Benzo(b)fluoranthene	<15 µg/kg	TM218		2780 M	1970 M	1520 M	1550 M	415 #	566 #
Benzo(k)fluoranthene	<14 µg/kg	TM218		841 M	700 M	579 M	652 M	127 #	236 #
Benzo(a)pyrene	<15 µg/kg	TM218		1640 M	1380 M	1090 M	1480 M	240 #	484 #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1290 M	1230 M	823 M	904 M	207 #	284 #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		268 M	207 M	155 M	154 M	44.4 #	64.8 #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1190 M	863 M	747 M	862 M	190 #	223 #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		27000	13200	10100	11700	3420	9480

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		22.5 4	86.2	86.2	100	68.5 4	113
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2860	<1000	<1000	<1000	<1000	<5000
Aliphatics >C16-C21	<1000 µg/kg	TM414		18300	<1000	1640	<1000	3880	10300
Aliphatics >C21-C35	<1000 µg/kg	TM414		46600	<1000	11000	<1000	15800	35500
Aliphatics >C35-C44	<1000 µg/kg	TM414		15200	<1000	4750	<1000	5140	13600
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		83500	<5000	17900	<5000	25600	63200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		121000	<10000	32300	<10000	50600	98800
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	<10	<10	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2490	<1000	<1000	<1000	<1000	<5000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		8030	<1000	1380	<1000	5240	<5000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		24900	<1000	11600	1030	17200	26800
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1360	<1000	1460	<1000	1950	<5000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<5000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		37100	<5000	14400	<5000	25000	35600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		121000	<10000	32300	<10000	50600	98800
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50	<50	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50	<50	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20	<20	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		94.6	91	53.6 4	102	117	65.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	14.8	31.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	27.4	59.2 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1430	1340	2520	<1000	<10000
Aliphatics >C21-C35	<1000 µg/kg	TM414		<1000	5630	5350	7930	4750	16500
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	32500
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	7530	7140	10600	6370	56300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		<10000	15000	38700	50600	23500	227000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	18.2	39.4 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	<1000	2910	3460	2870	41600
Aromatics > EC21-EC35	<1000 µg/kg	TM414		<1000	5660	24400	30400	12300	112000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	4080	5830	1710	13800
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<10000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		<5000	7510	31600	39900	17100	170000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	15000	38700	50600	23500	227000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	90.5 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	90.5 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		47.3 4	89.5	54.9 4	74.9	85.5	36.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	12.8	<10 4	<10	14.6	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	42.9	42.5 4	<10	60.5	27.4 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	62.6	40.4 4	<10	59.4	31.7 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	4060	1390	1760	1650	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		2300	6400	5430	18200	9070	2890
Aliphatics >C21-C35	<1000 µg/kg	TM414		13300	20300	35200	25800	33600	17300
Aliphatics >C35-C44	<1000 µg/kg	TM414		4060	7870	9100	6930	8670	2190
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		19700	39000	51400	53000	53000	22800
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		57500	92900	101000	169000	109000	28300
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	20.2	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	18.1 4	<10	29.1	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	41.8	26.6 4	<10	39.2	21.1 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	2300	1370	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		7640	14000	6850	16900	7680	1160
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28300	34100	36800	85700	44100	3240
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1300	2990	4140	12600	3360	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1610	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		37800	53900	49300	116000	56100	5530
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		57500	93000	101000	169000	109000	28400
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	118	82.9 4	<50	134	59.1 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	88.5	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	118	82.9 4	<20	223	59.1 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	T7-2
Depth (m)	1.20 - 1.20
Sample Type	Soil/Solid (S)
Date Sampled	27/01/2021
Sample Time	.
Date Received	29/01/2021
SDG Ref	210129-39
Lab Sample No.(s)	23630275
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	2 4
Aliphatics >C5-C6	<10 µg/kg	TM089	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414	6570
Aliphatics >C12-C16	<1000 µg/kg	TM414	14600
Aliphatics >C16-C21	<1000 µg/kg	TM414	11100
Aliphatics >C21-C35	<1000 µg/kg	TM414	23900
Aliphatics >C35-C44	<1000 µg/kg	TM414	3790
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	60000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	120000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414	1280
Aromatics > EC12-EC16	<1000 µg/kg	TM414	8350
Aromatics > EC16-EC21	<1000 µg/kg	TM414	18100
Aromatics > EC21-EC35	<1000 µg/kg	TM414	30900
Aromatics >EC35-EC44	<1000 µg/kg	TM414	1290
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	59900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	120000
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50 4
GRO >C5-C10	<20 µg/kg	TM089	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2
			Depth (m)	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630284	23630288	23630297	23630306	23630255	23630262
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	126	115	108	111	111
Toluene-d8**	%	TM116		93.9	100	97.4	98.5	95.8	94.9
4-Bromofluorobenzene**	%	TM116		80.7	93.4	93.6	99.6	94.3	91.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	317 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AH30-1	AH30-2	AH31-1	AH31-2	AI30-1	AI30-2
			Depth (m)	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70	0.30 - 0.30	1.80 - 1.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630239	23630248	23630211	23630215	23630227	23630232
			AGS Reference						
Dibromofluoromethane**	%	TM116		118	115	118	107	106	105
Toluene-d8**	%	TM116		96.5	98.7	93	94.1	95.4	91.9
4-Bromofluorobenzene**	%	TM116		96.6	94.5	81.7	89.3	94.9	83.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	392 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1
			Depth (m)	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			SDG Ref	210129-39	210129-39	210129-39	210129-39	210129-39	210129-39
			Lab Sample No.(s)	23630219	23630223	23630206	23630267	23630280	23630271
			AGS Reference						
Dibromofluoromethane**	%	TM116		112	113	104	105	98.6	124
Toluene-d8**	%	TM116		92.6	96.8	97.5	97.1	94.1	88
4-Bromofluorobenzene**	%	TM116		79.4	86.7	93.2	98.1	85.7	82.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 #
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 #
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 #
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Naphthalene	<13 µg/kg	TM116		370 M	498 M	<260 M	<260 M	<260 M	<260 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	T7-2
Depth (m)	1.20 - 1.20
Sample Type	Soil/Solid (S)
Date Sampled	27/01/2021
Sample Time	.
Date Received	29/01/2021
SDG Ref	210129-39
Lab Sample No.(s)	23630275
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	104
Toluene-d8**	%	TM116	93.7
4-Bromofluorobenzene**	%	TM116	86
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<2000 #
Benzene	<9 µg/kg	TM116	<1800 #
Toluene	<7 µg/kg	TM116	<1400 #
Ethylbenzene	<4 µg/kg	TM116	<800 #
p/m-Xylene	<10 µg/kg	TM116	<2000 #
o-Xylene	<10 µg/kg	TM116	<2000 #
Naphthalene	<13 µg/kg	TM116	<2600 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<4
Sum of BTEX	<40 µg/kg	TM116	<8000

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AG30-2 1.30 - 1.30 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630288 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AG31-2 1.20 - 1.20 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630306 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH29-2 1.60 - 1.60 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630262 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH30-2 1.40 - 1.40 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630248 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AH31-2 1.70 - 1.70 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630215 TM048	08/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AI30-2 1.80 - 1.80 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630232 TM048	08/02/2021	James Richards	ACM debris in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AI31-2 1.50 - 1.50 SOLID 28/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630223 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	T6-1 0.50 - 0.50 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630206 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	T6-3 2.20 - 2.20 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630280 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	T7-1 0.50 - 0.50 SOLID 27/01/2021 00:00:00 29/01/2021 05:00:00 210129-39 23630271 TM048	08/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AI30-2	None (#)	N/A	0.0018 (#)	<0.001 (#)	0.0018 (#)
Depth (m)	1.80 - 1.80					
Sample Type	SOLID					
Date Sampled	28/01/2021 00:00:00					
Date Receieved	29/01/2021 05:00:00					
SDG	210129-39					
Original Sample	23630232					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210129-39	**Client Reference:**	P18-669	**Report Number:**	586994
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	586360

Test Completion Dates

Lab Sample No(s)	23630284	23630288	23630297	23630306	23630255	23630262	23630239	23630248	23630211	23630215
Customer Sample Ref.	AG30-1	AG30-2	AG31-1	AG31-2	AH29-1	AH29-2	AH30-1	AH30-2	AH31-1	AH31-2
AGS Ref.										
Depth	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.20 - 1.20	0.30 - 0.30	1.60 - 1.60	0.20 - 0.20	1.40 - 1.40	0.50 - 0.50	1.70 - 1.70
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021		08-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	09-Feb-2021	07-Feb-2021
Metals in solid samples by OES	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021	05-Feb-2021
PAH by GCMS		04-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	04-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021
pH	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	05-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	08-Feb-2021	10-Feb-2021	10-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021
Total Organic Carbon	08-Feb-2021	08-Feb-2021	03-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	09-Feb-2021	07-Feb-2021
VOC MS (S)	07-Feb-2021	08-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021

Lab Sample No(s)	23630227	23630232	23630219	23630223	23630206	23630267	23630280	23630271	23630275
Customer Sample Ref.	AI30-1	AI30-2	AI31-1	AI31-2	T6-1	T6-2	T6-3	T7-1	T7-2
AGS Ref.									
Depth	0.30 - 0.30	1.80 - 1.80	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.00 - 1.50	2.20 - 2.20	0.50 - 0.50	1.20 - 1.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		08-Feb-2021		05-Feb-2021	05-Feb-2021		05-Feb-2021	08-Feb-2021	
Asbestos Quantification - Full		16-Feb-2021							
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	04-Feb-2021	02-Feb-2021	04-Feb-2021
EPH CWG GC (S)	05-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021	05-Feb-2021
PAH by GCMS	03-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
pH	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	05-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	08-Feb-2021	08-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	29-Jan-2021	30-Jan-2021	29-Jan-2021	30-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021	29-Jan-2021
Total Organic Carbon	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021	07-Feb-2021	07-Feb-2021	07-Feb-2021	08-Feb-2021	08-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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Deeside
CH5 3US
Tel: (01244) 528700
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Website: www.alsenvironmental.co.uk

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	10 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210130-32
Your Reference:	P18-669
Location:	Llanwern
Report No:	586352

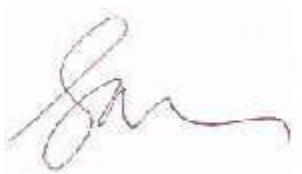
We received 24 samples on Saturday January 30, 2021 and 24 of these samples were scheduled for analysis which was completed on Wednesday February 10, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23638988	AJ27-1		0.70 - 0.70	29/01/2021
23638943	AJ29-1		0.70 - 0.70	28/01/2021
23638959	AJ29-2		1.50 - 1.50	28/01/2021
23638993	AJ30-1		0.40 - 0.40	28/01/2021
23638999	AJ30-2		1.50 - 1.50	28/01/2021
23638980	AK27-1		0.80 - 0.80	29/01/2021
23638976	AK28-1		1.00 - 1.00	29/01/2021
23639025	AK30-1		0.20 - 0.20	28/01/2021
23639030	AK30-2		1.00 - 1.00	28/01/2021
23639015	AK31-1		0.10 - 0.10	28/01/2021
23639020	AK31-2		1.10 - 1.10	28/01/2021
23639060	AK32-1		1.00 - 1.00	28/01/2021
23639067	AK33-1		0.20 - 0.20	29/01/2021
23639071	AK34-1		0.80 - 0.80	29/01/2021
23639077	AK34-2		1.60 - 1.60	29/01/2021
23638964	AL28-1		0.50 - 0.50	29/01/2021
23638970	AL28-2		1.20 - 1.20	29/01/2021
23638954	AL29-1		0.80 - 0.80	29/01/2021
23639034	AL30-1		0.50 - 0.50	28/01/2021
23639007	AL30-2		2.00 - 2.00	28/01/2021
23639041	AL31-1		0.50 - 0.50	28/01/2021
23639045	AL31-2		1.50 - 1.50	28/01/2021
23639051	AL32-1		0.50 - 0.50	28/01/2021
23638948	AL33-1		0.80 - 0.80	29/01/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	23638988	AJ27-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638943	AJ29-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638959	AJ29-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638993	AJ30-1		0.40 - 0.40	60g VOC (ALE215)	S
			23638999	AJ30-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638980	AK27-1		0.80 - 0.80	60g VOC (ALE215)	S
			23638976	AK28-1		1.00 - 1.00	60g VOC (ALE215)	S
			23639025	AK30-1		0.20 - 0.20	60g VOC (ALE215)	S
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	1kg TUB with Handle (ALE260)	S
			23638943	AJ29-1		0.70 - 0.70	1kg TUB with Handle (ALE260)	S
			23638959	AJ29-2		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
			23638993	AJ30-1		0.40 - 0.40	1kg TUB with Handle (ALE260)	S
			23638999	AJ30-2		1.50 - 1.50	1kg TUB with Handle (ALE260)	S
			23638980	AK27-1		0.80 - 0.80	1kg TUB with Handle (ALE260)	S
			23638976	AK28-1		1.00 - 1.00	1kg TUB with Handle (ALE260)	S
			23639025	AK30-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638943	AJ29-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638959	AJ29-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638993	AJ30-1		0.40 - 0.40	60g VOC (ALE215)	S
			23638999	AJ30-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638980	AK27-1		0.80 - 0.80	60g VOC (ALE215)	S
			23638976	AK28-1		1.00 - 1.00	60g VOC (ALE215)	S
			23639025	AK30-1		0.20 - 0.20	60g VOC (ALE215)	S
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
PAH by GCMS	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
pH	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
Sample description	All	NDPs: 0 Tests: 23	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
Total Organic Carbon	All	NDPs: 0 Tests: 23	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638943	AJ29-1		0.70 - 0.70	250g Amber Jar (ALE210)	S
			23638959	AJ29-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638993	AJ30-1		0.40 - 0.40	250g Amber Jar (ALE210)	S
			23638999	AJ30-2		1.50 - 1.50	250g Amber Jar (ALE210)	S
			23638980	AK27-1		0.80 - 0.80	250g Amber Jar (ALE210)	S
			23638976	AK28-1		1.00 - 1.00	250g Amber Jar (ALE210)	S
			23639025	AK30-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
VOC MS (S)	All	NDPs: 0 Tests: 24	23638988	AJ27-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638943	AJ29-1		0.70 - 0.70	60g VOC (ALE215)	S
			23638959	AJ29-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638993	AJ30-1		0.40 - 0.40	60g VOC (ALE215)	S
			23638999	AJ30-2		1.50 - 1.50	60g VOC (ALE215)	S
			23638980	AK27-1		0.80 - 0.80	60g VOC (ALE215)	S
			23638976	AK28-1		1.00 - 1.00	60g VOC (ALE215)	S
			23639025	AK30-1		0.20 - 0.20	60g VOC (ALE215)	S

23638970	AL28-2		1.20 - 1.20	1kg TUB with Handle (ALE260)	S			x											
23638964	AL28-1		0.50 - 0.50	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639077	AK34-2		1.60 - 1.60	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639071	AK34-1		0.80 - 0.80	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639067	AK33-1		0.20 - 0.20	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639060	AK32-1		1.00 - 1.00	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639020	AK31-2		1.10 - 1.10	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x		x	
23639015	AK31-1		0.10 - 0.10	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
				1kg TUB with Handle (ALE260)	S			x											
23639030	AK30-2		1.00 - 1.00	60g VOC (ALE215)	S						x								x
				250g Amber Jar (ALE210)	S	x			x	x		x	x	x	x	x	x	x	
23639025	AK30-1		0.20 - 0.20	60g VOC (ALE215)	S						x								x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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

Lab Sample No(s)			23638970		23638954		23639034		23639007		23639041		23639045		23639051		23638948				
Customer Sample Reference			AL28-2		AL29-1		AL30-1		AL30-2		AL31-1		AL31-2		AL32-1		AL33-1				
AGS Reference																					
Depth (m)			1.20 - 1.20		0.80 - 0.80		0.50 - 0.50		2.00 - 2.00		0.50 - 0.50		1.50 - 1.50		0.50 - 0.50		0.80 - 0.80				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X			X					X					X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24		X			X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 24		X			X			X		X			X		X			X	

23638948	AL33-1		0.80 - 0.80	60g VOC (ALE215)	S
					X
					X

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23638988	AJ27-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23638943	AJ29-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23638959	AJ29-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23638993	AJ30-1	0.40 - 0.40	Black	Sand	Stones	None
23638999	AJ30-2	1.50 - 1.50	Dark Brown	Sand	Stones	None
23638980	AK27-1	0.80 - 0.80	Dark Brown	Sand	Stones	None
23638976	AK28-1	1.00 - 1.00	Grey	Sand	Stones	Concrete/Aggregate
23639025	AK30-1	0.20 - 0.20	Dark Brown	Sand	Stones	None
23639030	AK30-2	1.00 - 1.00	Grey	Sand	Stones	Concrete/Aggregate
23639015	AK31-1	0.10 - 0.10	Dark Brown	Sandy Loam	Stones	Concrete/Aggregate
23639020	AK31-2	1.10 - 1.10	Black	Sand	None	None
23639060	AK32-1	1.00 - 1.00	Black	Sand	Stones	None
23639067	AK33-1	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23639071	AK34-1	0.80 - 0.80	Dark Brown	Sand	None	Stones
23639077	AK34-2	1.60 - 1.60	Dark Brown	Sand	Vegetation	Stones
23638964	AL28-1	0.50 - 0.50	Dark Brown	Sand	Stones	None
23638970	AL28-2	1.20 - 1.20	Dark Brown	Sand	Stones	None
23638954	AL29-1	0.80 - 0.80	Dark Brown	Sand	Brick	Stones
23639034	AL30-1	0.50 - 0.50	Grey	Sand	Stones	None
23639007	AL30-2	2.00 - 2.00	Grey	Sand	Stones	Concrete/Aggregate
23639041	AL31-1	0.50 - 0.50	Grey	Sand	Stones	None
23639045	AL31-2	1.50 - 1.50	Dark Brown	Sand	Stones	N/A
23639051	AL32-1	0.50 - 0.50	Black	Sand	Stones	Concrete/Aggregate
23638948	AL33-1	0.80 - 0.80	Dark Brown	Stone/Soil	None	Stones

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	1.4	10	13	20	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	18.6 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.31 #	3.95 #	4.22 #	>100 #	22.9 #	1.81 #
pH	1 pH Units	TM133		11.9 M	9.91 M	9.58 M	8.83 M	9.57 M	12.1 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	14.2 M	9.37 M	7.95 M	11.5 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.92 M	2.29 M	1.51 M	0.923 M	0.632 M	0.469 M
Chromium	<0.9 mg/kg	TM181		374 M	<9 M	<9 M	17.8 M	30.6 M	205 M
Copper	<1.4 mg/kg	TM181		27.7 M	23.5 M	14.5 M	34.6 M	31.3 M	<14 M
Iron	<1000 mg/kg	TM181		133000 #	338000 #		49600 #		49900 #
Lead	<0.7 mg/kg	TM181		53.6 M	39.7 M	24.7 M	52.8 M	47.6 M	39.6 M
Manganese	<0.13 mg/kg	TM181		29500 M	4850 M	2970 M	1360 M	1360 M	14900 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		15.3 M	36.9 M	21.7 M	17.5 M	33.3 M	4.61 M
Selenium	<1 mg/kg	TM181		14 #	<10 #	<10 #	<10 #	<10 #	13.4 #
Vanadium	<0.2 mg/kg	TM181		968 #	49.6 #	36.4 #	34.8 #	43 #	244 #
Zinc	<1.9 mg/kg	TM181		84.5 M	131 M	80.8 M	70.3 M	86.9 M	42.9 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.5	12	13	11	23	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		2.6 #	12.1 #	38.4 #	17.2 #		31.5 #
pH	1 pH Units	TM133		12 M	9.22 M	11.3 M	10.5 M	10.8 M	11.4 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	7.22 M	11.2 M	10.3 M	6.83 M	6.44 M
Cadmium	<0.02 mg/kg	TM181		1.27 M	0.769 M	1.47 M	2.19 M	0.45 M	0.963 M
Chromium	<0.9 mg/kg	TM181		723 M	21.9 M	222 M	142 M	15.3 M	265 M
Copper	<1.4 mg/kg	TM181		37.9 M	<14 M	40.9 M	36.5 M	21.7 M	16.4 M
Iron	<1000 mg/kg	TM181		152000 #	58900 #	54800 #	230000 #		
Lead	<0.7 mg/kg	TM181		137 M	44.3 M	60.4 M	46.7 M	57.2 M	34.2 M
Manganese	<0.13 mg/kg	TM181		34000 M	1710 M	8170 M	5740 M	1150 M	3190 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		13.1 M	24.3 M	26.3 M	37.2 M	11.3 M	14.4 M
Selenium	<1 mg/kg	TM181		23.3 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		543 #	32.7 #	285 #	97.3 #	26 #	233 #
Zinc	<1.9 mg/kg	TM181		94.1 M	77.6 M	265 M	109 M	75.3 M	68.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	11	13	6.9	6.9	9.3
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		9.43 #	10.1 #	4.14 #	<0.35 #	3.31 #	6.14 #
pH	1 pH Units	TM133		10.2 M	9.51 M	10.2 M	12.5 M	12.4 M	11.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	1.02 M
Arsenic	<0.6 mg/kg	TM181		9.69 M	13.6 M	15.9 M	<6 M	<6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.6 M	1.49 M	1.34 M	1.09 M	1.19 M	1.42 M
Chromium	<0.9 mg/kg	TM181		75 M	119 M	33.8 M	1080 M	936 M	836 M
Copper	<1.4 mg/kg	TM181		22.4 M	23.3 M	20.2 M	14.3 M	<14 M	23.3 M
Iron	<1000 mg/kg	TM181		134000 #		101000 #		163000 #	166000 #
Lead	<0.7 mg/kg	TM181		72 M	67.5 M	44.3 M	22.4 M	23.5 M	100 M
Manganese	<0.13 mg/kg	TM181		8420 M	8330 M	6690 M	48700 M	48700 M	43500 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		45.9 M	26.5 M	27.2 M	5.25 M	5.37 M	9.39 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	30.6 #	31.2 #	29.5 #
Vanadium	<0.2 mg/kg	TM181		139 #	134 #	53.6 #	840 #	709 #	684 #
Zinc	<1.9 mg/kg	TM181		212 M	196 M	120 M	40.6 M	57.3 M	123 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	9.3	21	12	9.4	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 #
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 #
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 #
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 #
Soil Organic Matter (SOM)	<0.35 %	TM132		20.5 #	21.2 #	54.5 #	3.33 #	18.1 #	1.62 #
pH	1 pH Units	TM133		10.6 M	11.9 M	10.6 M	9.1 M	11.3 M	11.9 #
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Arsenic	<0.6 mg/kg	TM181		8.72 M	<6 M	<6 M	11.4 M	8.28 M	7.73 #
Cadmium	<0.02 mg/kg	TM181		1.22 M	1.45 M	1.11 M	0.662 M	1.87 M	1.01 #
Chromium	<0.9 mg/kg	TM181		235 M	653 M	68.5 M	25.3 M	160 M	1170 #
Copper	<1.4 mg/kg	TM181		19.2 M	15.3 M	<14 M	24 M	20.4 M	53.3 #
Iron	<1000 mg/kg	TM181		90000 #	144000 #	95800 #	32100 #	138000 #	
Lead	<0.7 mg/kg	TM181		90 M	<7 M	23.3 M	19.8 M	37.6 M	26.8 #
Manganese	<0.13 mg/kg	TM181		11800 M	35700 M	11400 M	1690 M	12900 M	16300 #
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 #
Nickel	<0.2 mg/kg	TM181		23.6 M	5.78 M	22.8 M	26.6 M	34.6 M	496 #
Selenium	<1 mg/kg	TM181		10.2 #	19.7 #	<10 #	<10 #	<10 #	10.4 #
Vanadium	<0.2 mg/kg	TM181		218 #	544 #	94.3 #	40.1 #	157 #	255 #
Zinc	<1.9 mg/kg	TM181		198 M	39.5 M	81.3 M	64.9 M	98.7 M	70.7 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.4	86.3	83	77.8	82.9	80.2
Acenaphthene-d10 % recovery**	%	TM218		82.2	82.5	83.4	78	80.7	81.8
Phenanthrene-d10 % recovery**	%	TM218		80.2	80.8	80.1	74.5	80.9	80.5
Chrysene-d12 % recovery**	%	TM218		78.5	77.8	72.1	66.8	76.7	78
Perylene-d12 % recovery**	%	TM218		75.5	74.9	70.2	70.4	73.4	74.6
Naphthalene	<9 µg/kg	TM218		21 M	<9 M	<9 M	112 M	117 M	140 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	<12 M	<12 M	173 M	191 M	62.7 M
Acenaphthene	<8 µg/kg	TM218		42.9 M	<8 M	<8 M	<8 M	<8 M	22.8 M
Fluorene	<10 µg/kg	TM218		19.1 M	<10 M	<10 M	34.4 M	58.1 M	33.1 M
Phenanthrene	<15 µg/kg	TM218		458 M	43.8 M	22.3 M	233 M	350 M	306 M
Anthracene	<16 µg/kg	TM218		112 M	<16 M	<16 M	71.2 M	99.1 M	78.5 M
Fluoranthene	<17 µg/kg	TM218		1250 M	64.2 M	31.2 M	956 M	874 M	597 M
Pyrene	<15 µg/kg	TM218		1190 M	46.4 M	27.1 M	892 M	727 M	462 M
Benz(a)anthracene	<14 µg/kg	TM218		715 M	29.7 M	30.7 M	732 M	484 M	330 M
Chrysene	<10 µg/kg	TM218		828 M	30.4 M	37.1 M	560 M	514 M	391 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1190 M	40.9 M	64.1 M	1450 M	937 M	587 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		376 M	<14 M	19.2 M	430 M	280 M	181 M
Benzo(a)pyrene	<15 µg/kg	TM218		775 M	24.1 M	35.1 M	1060 M	570 M	332 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		618 M	23.6 M	38 M	972 M	566 M	318 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		103 M	<23 M	<23 M	164 M	108 M	68.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		652 M	<24 M	35.9 M	860 M	524 M	298 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		8350	303	341	8700	6400	4210

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.7	81.9	77.2	80.3	77.7	78.8
Acenaphthene-d10 % recovery**	%	TM218		82.4	81	79.1	83.5	78.7	82.5
Phenanthrene-d10 % recovery**	%	TM218		85.2	79.1	80.2	86.6	74.3	86.8
Chrysene-d12 % recovery**	%	TM218		88	75.2	81.2	75.5	63.8	75.9
Perylene-d12 % recovery**	%	TM218		102	72.2	75.3	72.2	62.3	70.5
Naphthalene	<9 µg/kg	TM218		19.5 M	31.9 M	27 M	568 M	134 M	547 M
Acenaphthylene	<12 µg/kg	TM218		<12 M	101 M	26.6 M	665 M	58.5 M	932 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<80 M	14.4 M	64 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	18.7 M	1050 M	89.5 M	562 M
Phenanthrene	<15 µg/kg	TM218		101 M	128 M	151 M	6250 M	835 M	3770 M
Anthracene	<16 µg/kg	TM218		17.8 M	49.4 M	30.8 M	2260 M	268 M	1440 M
Fluoranthene	<17 µg/kg	TM218		339 M	511 M	225 M	7650 M	886 M	11200 M
Pyrene	<15 µg/kg	TM218		316 M	416 M	170 M	5150 M	659 M	9490 M
Benz(a)anthracene	<14 µg/kg	TM218		177 M	317 M	115 M	2720 M	564 M	4800 M
Chrysene	<10 µg/kg	TM218		195 M	316 M	115 M	2220 M	567 M	4920 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		295 M	675 M	184 M	3190 M	771 M	7250 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		114 M	232 M	54.8 M	980 M	238 M	1710 M
Benzo(a)pyrene	<15 µg/kg	TM218		190 M	429 M	106 M	2000 M	537 M	4080 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		204 M	471 M	89.4 M	1850 M	377 M	4210 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		32.5 M	85.4 M	<23 M	324 M	99.1 M	686 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		162 M	407 M	85.1 M	1320 M	361 M	3360 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		2160	4170	1400	38200	6460	59000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		85.8	79.8	78.1	81	85.2	79.6
Acenaphthene-d10 % recovery**	%	TM218		81.2	83.1	82.3	81.9	80.9	85.4
Phenanthrene-d10 % recovery**	%	TM218		76.9	87	86.5	84.4	78	89.9
Chrysene-d12 % recovery**	%	TM218		76.8	75.7	79.4	79.7	76.7	78.6
Perylene-d12 % recovery**	%	TM218		77.9	70	75.9	83.9	73.5	72.1
Naphthalene	<9 µg/kg	TM218		42.1 M	59.9 M	23 M	<9 M	24.4 M	141 M
Acenaphthylene	<12 µg/kg	TM218		31.5 M	46.1 M	<12 M	<12 M	<12 M	47.2 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	<8 M	<8 M	24.7 M
Fluorene	<10 µg/kg	TM218		<10 M	<10 M	<10 M	<10 M	11.2 M	45.4 M
Phenanthrene	<15 µg/kg	TM218		92.3 M	120 M	42.8 M	17.3 M	107 M	409 M
Anthracene	<16 µg/kg	TM218		27.6 M	33.6 M	<16 M	<16 M	38.9 M	96.7 M
Fluoranthene	<17 µg/kg	TM218		193 M	301 M	89.1 M	48.4 M	184 M	776 M
Pyrene	<15 µg/kg	TM218		143 M	259 M	73.7 M	52.2 M	141 M	580 M
Benz(a)anthracene	<14 µg/kg	TM218		104 M	184 M	55 M	22.7 M	86 M	307 M
Chrysene	<10 µg/kg	TM218		101 M	157 M	60.6 M	32.9 M	97.2 M	309 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		186 M	388 M	104 M	50.2 M	130 M	473 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		61.5 M	104 M	29.5 M	18.5 M	47.9 M	140 M
Benzo(a)pyrene	<15 µg/kg	TM218		111 M	195 M	56.7 M	<15 M	77 M	259 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		128 M	221 M	62.2 M	23.1 M	71.1 M	268 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	34.4 M	<23 M	<23 M	<23 M	47.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		113 M	169 M	50.2 M	<24 M	67.2 M	208 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1330	2270	647	265	1080	4130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		80.9	81.1	78.5	81	82.1	83.7
Acenaphthene-d10 % recovery**	%	TM218		83.3	82.4	79.8	78	82.6	83.1
Phenanthrene-d10 % recovery**	%	TM218		83.7	79.6	77.5	78.6	83.1	81
Chrysene-d12 % recovery**	%	TM218		78	73.6	69	72.3	80.5	78.6
Perylene-d12 % recovery**	%	TM218		70.3	70	69.1	70.5	86.3	77
Naphthalene	<9 µg/kg	TM218		190 M	52.4 M	143 M	11.5 M	44.7 M	70.5 #
Acenaphthylene	<12 µg/kg	TM218		164 M	59.9 M	63.9 M	<12 M	38.3 M	30.5 #
Acenaphthene	<8 µg/kg	TM218		37 M	<8 M	11.9 M	<8 M	<8 M	<8 #
Fluorene	<10 µg/kg	TM218		136 M	28.1 M	37 M	<10 M	11.6 M	12.4 #
Phenanthrene	<15 µg/kg	TM218		943 M	406 M	390 M	28.8 M	137 M	113 #
Anthracene	<16 µg/kg	TM218		303 M	126 M	101 M	<16 M	43.6 M	30.8 #
Fluoranthene	<17 µg/kg	TM218		1820 M	666 M	704 M	38.5 M	354 M	208 #
Pyrene	<15 µg/kg	TM218		1330 M	496 M	526 M	30.4 M	276 M	163 #
Benz(a)anthracene	<14 µg/kg	TM218		857 M	255 M	409 M	23.2 M	243 M	126 #
Chrysene	<10 µg/kg	TM218		838 M	271 M	391 M	29.2 M	210 M	143 #
Benzo(b)fluoranthene	<15 µg/kg	TM218		1200 M	340 M	525 M	38.3 M	426 M	247 #
Benzo(k)fluoranthene	<14 µg/kg	TM218		380 M	101 M	181 M	<14 M	130 M	74.6 #
Benzo(a)pyrene	<15 µg/kg	TM218		692 M	201 M	382 M	20 M	271 M	149 #
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		589 M	175 M	286 M	<18 M	269 M	175 #
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		132 M	41.1 M	64.2 M	<23 M	47.6 M	31.1 #
Benzo(g,h,i)perylene	<24 µg/kg	TM218		546 M	175 M	261 M	<24 M	231 M	142 #
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		10200	3390	4480	220	2730	1720

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		130	96.3	122	77.2	122	102
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	15	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	18.4	20	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	20	42.6	22.5	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	10400	<1000	7390
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1100	<1000	20900	6190	26300
Aliphatics >C21-C35	<1000 µg/kg	TM414		7440	5090	1410	27100	18600	66600
Aliphatics >C35-C44	<1000 µg/kg	TM414		3070	<1000	<1000	4980	5250	11200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11500	6740	<5000	63900	31000	112000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		45000	<10000	<10000	101000	50800	123000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	13.3	28.8	15	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1020	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4410	<1000	<1000	4730	1870	1520
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28000	<1000	<1000	28800	16400	8940
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	2340	1030	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		33500	<5000	<5000	36900	19800	11700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		45000	<10000	<10000	101000	50900	123000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	61	57.5	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	61	57.5	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		109	84.7	89.2	55 4	48 4	81.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10 4	18.1 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	10.4	<10 4	28.4 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2780	<1000	2160	<5000	4910	1960
Aliphatics >C16-C21	<1000 µg/kg	TM414		14800	<1000	4490	10400	15300	18800
Aliphatics >C21-C35	<1000 µg/kg	TM414		54900	2720	1940	16700	22700	12100
Aliphatics >C35-C44	<1000 µg/kg	TM414		13600	1090	<1000	<5000	1930	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		86200	<5000	8980	32000	45200	33900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		94200	23800	40800	67600	67000	190000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10 4	19.4 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<5000	1030	2320
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	1420	1990	6630	6510	32200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		6370	12300	18500	23400	13200	110000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	5140	10900	<5000	<1000	11100
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1320	1820	<5000	<1000	1350
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		7990	18900	31800	35500	21800	156000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		94200	18900	40800	67600	67000	190000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	<20 4	<20

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		123	132 4	95.1	121	101	102
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	1100	<1000	<1000	1390	12600
Aliphatics >C21-C35	<1000 µg/kg	TM414		8240	8100	6570	12300	11800	44500
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1680	1510	12200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		9500	9880	8000	14900	15000	70200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		21800	21600	16100	16800	18100	84600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1350	<1000	<1000	<1000	<1000	1570
Aromatics > EC21-EC35	<1000 µg/kg	TM414		9840	10300	7010	<1000	1960	11400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1070	<1000	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		12300	11800	8070	<5000	<5000	14400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		21800	21600	16100	14900	15000	84600
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 4	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		76.6	101	47 4	122	97.8	98.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	11.4	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	14.8	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		3810	3080	2500	1150	4380	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		19700	10500	22600	5000	18700	4260
Aliphatics >C35-C44	<1000 µg/kg	TM414		8160	1460	30700	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		32100	15300	56400	6500	24300	5540
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		70500	20100	112000	<10000	69500	10900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6390	<1000	4870	<1000	<1000	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		29000	3360	45400	1450	43500	3800
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2250	<1000	4000	<1000	1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		38400	<5000	55200	<5000	45200	5320
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		70500	15300	112000	<10000	69500	10900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
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*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1
			Depth (m)	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638988	23638943	23638959	23638993	23638999	23638980
			AGS Reference						
Dibromofluoromethane**	%	TM116		114	116	115	120	155	114
Toluene-d8**	%	TM116		102	100	100	97.4	99.4	101
4-Bromofluorobenzene**	%	TM116		101	98	97.5	81.3	96.2	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	626 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK28-1	AK30-1	AK30-2	AK31-1	AK31-2	AK32-1
			Depth (m)	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10	1.10 - 1.10	1.00 - 1.00
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23638976	23639025	23639030	23639015	23639020	23639060
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	115	121	112	110	113
Toluene-d8**	%	TM116		101	97.9	99.3	96.1	96.5	102
4-Bromofluorobenzene**	%	TM116		98.9	91.7	96.7	85	81	95.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	462 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
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aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1
			Depth (m)	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639067	23639071	23639077	23638964	23638970	23638954
			AGS Reference						
Dibromofluoromethane**	%	TM116		119	115	116	114	111	117
Toluene-d8**	%	TM116		101	102	102	102	99.4	101
4-Bromofluorobenzene**	%	TM116		95.3	98.9	101	100	95.8	99.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL30-1	AL30-2	AL31-1	AL31-2	AL32-1	AL33-1
			Depth (m)	0.50 - 0.50	2.00 - 2.00	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	28/01/2021	28/01/2021	28/01/2021	28/01/2021	28/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021	30/01/2021
			SDG Ref	210130-32	210130-32	210130-32	210130-32	210130-32	210130-32
			Lab Sample No.(s)	23639034	23639007	23639041	23639045	23639051	23638948
			AGS Reference						
Dibromofluoromethane**	%	TM116		118	112	166	130	119	114
Toluene-d8**	%	TM116		101	99.5	98.4	98.7	99.1	102
4-Bromofluorobenzene**	%	TM116		98	96.8	93.5	99.2	93	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 #
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 #
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 #
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 #
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 #
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ29-1 0.70 - 0.70 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638943 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ30-1 0.40 - 0.40 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638993 TM048	05/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK27-1 0.80 - 0.80 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638980 TM048	05/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK30-1 0.20 - 0.20 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639025 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK31-1 0.10 - 0.10 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639015 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK33-1 0.20 - 0.20 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639067 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK34-2 1.60 - 1.60 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639077 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL28-2 1.20 - 1.20 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638970 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL29-1 0.80 - 0.80 SOLID 29/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23638954 TM048	08/02/21	Eva Guerra	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL30-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639034 TM048	05/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL31-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639041 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	AL32-1 0.50 - 0.50 SOLID 28/01/2021 00:00:00 30/01/2021 05:00:00 210130-32 23639051 TM048	05/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210130-32	**Client Reference:**	P18-669	**Report Number:**	586352
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23638988	23638943	23638959	23638993	23638999	23638980	23638976	23639025	23639030	23639015
Customer Sample Ref.	AJ27-1	AJ29-1	AJ29-2	AJ30-1	AJ30-2	AK27-1	AK28-1	AK30-1	AK30-2	AK31-1
AGS Ref.										
Depth	0.70 - 0.70	0.70 - 0.70	1.50 - 1.50	0.40 - 0.40	1.50 - 1.50	0.80 - 0.80	1.00 - 1.00	0.20 - 0.20	1.00 - 1.00	0.10 - 0.10
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021		05-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	08-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	08-Feb-2021	04-Feb-2021
PAH by GCMS	03-Feb-2021	08-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021
pH	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	09-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021	10-Feb-2021	05-Feb-2021	09-Feb-2021	05-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon	03-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021

Lab Sample No(s)	23639020	23639060	23639067	23639071	23639077	23638964	23638970	23638954	23639034	23639007
Customer Sample Ref.	AK31-2	AK32-1	AK33-1	AK34-1	AK34-2	AL28-1	AL28-2	AL29-1	AL30-1	AL30-2
AGS Ref.										
Depth	1.10 - 1.10	1.00 - 1.00	0.20 - 0.20	0.80 - 0.80	1.60 - 1.60	0.50 - 0.50	1.20 - 1.20	0.80 - 0.80	0.50 - 0.50	2.00 - 2.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples			05-Feb-2021		05-Feb-2021		05-Feb-2021	08-Feb-2021	05-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
EPH CWG GC (S)	04-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
Metals in solid samples by OES	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	08-Feb-2021
PAH by GCMS	05-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	04-Feb-2021	08-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
pH	01-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021	02-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon		08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
VOC MS (S)	08-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021	05-Feb-2021	08-Feb-2021

Lab Sample No(s)	23639041	23639045	23639051	23638948
Customer Sample Ref.	AL31-1	AL31-2	AL32-1	AL33-1
AGS Ref.				
Depth	0.50 - 0.50	1.50 - 1.50	0.50 - 0.50	0.80 - 0.80
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	03-Feb-2021	05-Feb-2021	08-Feb-2021	05-Feb-2021
Asbestos ID in Solid Samples	05-Feb-2021		05-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	03-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021
EPH CWG GC (S)	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021
GRO by GC-FID (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Metals in solid samples by OES	04-Feb-2021	05-Feb-2021	08-Feb-2021	04-Feb-2021
PAH by GCMS	05-Feb-2021	03-Feb-2021	05-Feb-2021	03-Feb-2021
pH	02-Feb-2021	01-Feb-2021	02-Feb-2021	01-Feb-2021
Phenols by HPLC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	05-Feb-2021
Sample description	30-Jan-2021	30-Jan-2021	30-Jan-2021	30-Jan-2021
Total Organic Carbon	09-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
TPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
VOC MS (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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:	12 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210202-91
Your Reference:	P18-669
Location:	Llanwern
Report No:	586569

We received 23 samples on Tuesday February 02, 2021 and 23 of these samples were scheduled for analysis which was completed on Friday February 12, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23652632	AJ21-1		0.30 - 0.30	29/01/2021
23652638	AJ21-2		1.30 - 1.30	29/01/2021
23652642	AK21-1		0.50 - 0.50	29/01/2021
23652650	AK21-2		1.20 - 1.20	29/01/2021
23652548	AK22-1		0.50 - 0.50	29/01/2021
23652599	AK22-2		1.60 - 1.60	29/01/2021
23652657	AL21-1		0.50 - 0.50	29/01/2021
23652664	AL21-2		1.40 - 1.40	29/01/2021
23652671	P20-1		0.50 - 0.50	01/02/2021
23652552	P20-2		1.30 - 1.30	01/02/2021
23652557	P21-1		0.30 - 0.30	01/02/2021
23652561	P21-2		1.50 - 1.50	01/02/2021
23652565	Q20-1		0.60 - 0.60	01/02/2021
23652571	Q20-2		1.80 - 1.80	01/02/2021
23652577	Q21-1		0.30 - 0.30	01/02/2021
23652581	Q21-2		1.90 - 1.90	01/02/2021
23652618	Q22-1		0.30 - 0.30	01/02/2021
23652623	Q22-2		1.70 - 1.70	01/02/2021
23652585	R21-1		0.30 - 0.30	01/02/2021
23652589	R21-2		1.00 - 1.00	01/02/2021
23652594	R21-3		2.20 - 2.20	01/02/2021
23652609	R22-1		0.20 - 0.20	01/02/2021
23652613	R22-2		1.60 - 1.60	01/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)	23652632	23652638	23652642	23652650	23652548	23652599	23652657	23652664
			Customer Sample Reference	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2	AL21-1	AL21-2
			AGS Reference								
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60	0.50 - 0.50	1.40 - 1.40
			Container	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12		X					X					X					X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23				X		X			X		X			X		X				X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 23				X		X			X		X			X		X				X	

23652581	Q21-2		1.90 - 1.90	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652577	Q21-1		0.30 - 0.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652571	Q20-2		1.80 - 1.80	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652565	Q20-1		0.60 - 0.60	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652561	P21-2		1.50 - 1.50	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652557	P21-1		0.30 - 0.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652552	P20-2		1.30 - 1.30	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
23652671	P20-1		0.50 - 0.50	60g VOC (ALE215)	S						X											X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	X			
				1kg TUB with Handle (ALE260)	S		X															
23652664	AL21-2		1.40 - 1.40	60g VOC (ALE215)	S						X											X

Validated

CERTIFICATE OF ANALYSIS

SDG: 210202-91 **Client Reference:** P18-669 **Report Number:** 586569
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend

X Test

N No Determination Possible

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

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23652618	Q22-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
							1kg TUB with Handle (ALE260)	S
			23652623	Q22-2		1.70 - 1.70	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
							1kg TUB with Handle (ALE260)	S
			23652585	R21-1		0.30 - 0.30	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23652589	R21-2		1.00 - 1.00	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23652594	R21-3		2.20 - 2.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23652609	R22-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23652613	R22-2		1.60 - 1.60	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23	X				X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23	X				X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 23	X				X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23		X				X
Metals in solid samples by OES	All	NDPs: 0 Tests: 23	X				X	
PAH by GCMS	All	NDPs: 0 Tests: 23	X				X	
pH	All	NDPs: 0 Tests: 23	X				X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23	X				X	
Sample description	All	NDPs: 0 Tests: 23	X				X	
Total Organic Carbon	All	NDPs: 0 Tests: 23	X				X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 23	X				X	
VOC MS (S)	All	NDPs: 0 Tests: 23		X				X

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23652632	AJ21-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652638	AJ21-2	1.30 - 1.30	Light Brown	Sand	Stones	None
23652642	AK21-1	0.50 - 0.50	Dark Brown	Sandy Clay	Stones	None
23652650	AK21-2	1.20 - 1.20	Dark Brown	Loamy Sand	Stones	None
23652548	AK22-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652599	AK22-2	1.60 - 1.60	Dark Brown	Silty Sand	Stones	None
23652657	AL21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652664	AL21-2	1.40 - 1.40	Dark Brown	Sand	Stones	None
23652671	P20-1	0.50 - 0.50	Dark Brown	Sandy Silt Loam	Stones	None
23652552	P20-2	1.30 - 1.30	Dark Brown	Sandy Clay Loam	Stones	None
23652557	P21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652561	P21-2	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23652565	Q20-1	0.60 - 0.60	Dark Brown	Sandy Silt Loam	Stones	None
23652571	Q20-2	1.80 - 1.80	Dark Brown	Stone/Soil	Stones	None
23652577	Q21-1	0.30 - 0.30	Dark Brown	Sandy Silt Loam	Stones	None
23652581	Q21-2	1.90 - 1.90	Light Brown	Silty Sand	Stones	Vegetation
23652618	Q22-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652623	Q22-2	1.70 - 1.70	Dark Brown	Loamy Sand	Stones	None
23652585	R21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652589	R21-2	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	None
23652594	R21-3	2.20 - 2.20	Dark Brown	Silty Sand	Stones	None
23652609	R22-1	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	None
23652613	R22-2	1.60 - 1.60	Dark Brown	Sandy Loam	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		6.7	9.4	14	13	12	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.07 #	2.09 #	2.09 #	11.1 #	37.4 #	11.3 #
pH	1 pH Units	TM133		10.2 M	9.22 M	8.84 M	10.3 M	11.3 M	11.6 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	4.21 M	5.06 M	1.73 M
Arsenic	<0.6 mg/kg	TM181		<6 M	61.5 M	11.8 M	<6 M	12.2 M	7.92 M
Cadmium	<0.02 mg/kg	TM181		0.394 M	1.72 M	0.353 M	0.439 M	1.04 M	0.52 M
Chromium	<0.9 mg/kg	TM181		132 M	11.6 M	14.4 M	31 M	<9 M	37.2 M
Copper	<1.4 mg/kg	TM181		15.9 M	11 M	16.7 M	<14 M	20.7 M	19.6 M
Iron	<1000 mg/kg	TM181		98000 #	15600 #	30300 #	43300 #	220000 #	76400 #
Lead	<0.7 mg/kg	TM181		43.1 M	80.1 M	32.4 M	76.3 M	382 M	127 M
Manganese	<0.13 mg/kg	TM181		8510 M	2030 M	1050 M	5120 M	4060 M	2940 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 M	<0.1 M	<1 M	5.69 M	<1 M
Nickel	<0.2 mg/kg	TM181		23 M	8.83 M	24.3 M	10.8 M	36.9 M	24.8 M
Selenium	<1 mg/kg	TM181		<10 #	1.71 #	<1 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		70.4 #	34 #	26.4 #	38.5 #	280 #	62.9 #
Zinc	<1.9 mg/kg	TM181		131 M	573 M	117 M	237 M	641 M	236 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	11	9.8	23	13	9.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	51.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0258 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0129 M	0.0114 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		12 #	5.26 #	10.9 #	8.46 #	13.8 #	2.1 #
pH	1 pH Units	TM133		8.81 M	9.39 M	11.8 M	11.3 M	11.3 M	11.2 M
Cyanide, Total	<1 mg/kg	TM153		3.41 M	2.09 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.2 M	<6 M	6.61 M	16 M	9.58 M	7.79 M
Cadmium	<0.02 mg/kg	TM181		1.89 M	<0.2 M	0.716 M	0.537 M	0.864 M	0.356 M
Chromium	<0.9 mg/kg	TM181		238 M	12 M	131 M	56.8 M	67.7 M	456 M
Copper	<1.4 mg/kg	TM181		26.3 M	17.8 M	<14 M	21.9 M	17 M	27.5 M
Iron	<1000 mg/kg	TM181		109000 #	18500 #	194000 #	116000 #	176000 #	176000 #
Lead	<0.7 mg/kg	TM181		167 M	27 M	47.9 M	44.2 M	63.2 M	34.9 M
Manganese	<0.13 mg/kg	TM181		16900 M	1060 M	7940 M	4390 M	6860 M	19500 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.7 M	19.6 M	22.4 M	34.2 M	27.8 M	15.1 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		208 #	25.6 #	154 #	106 #	121 #	408 #
Zinc	<1.9 mg/kg	TM181		546 M	75.6 M	168 M	131 M	191 M	107 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.9	17	9.1	15	13	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	43.9 #	<12 M	27.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0549 M	<0.01 #	0.011 M	<0.01 M	0.023 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	0.023 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0549 M	<0.035 #	<0.035 M	<0.035 M	0.046 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.1 #	12.2 #	19.7 #	3.05 #	4.69 #	1.07 #
pH	1 pH Units	TM133		11.2 M	9.61 #	10.3 M	8.62 M	12.1 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M	1.96 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.13 M	9.02 #	7.96 M	6.39 M	18.6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.03 M	0.139 #	0.882 M	0.306 M	2.86 M	0.427 M
Chromium	<0.9 mg/kg	TM181		81.9 M	5.19 #	62 M	20.1 M	411 M	125 M
Copper	<1.4 mg/kg	TM181		21.3 M	23 #	19.4 M	<14 M	41.7 M	<14 M
Iron	<1000 mg/kg	TM181		75700 #	20500 #	148000 #	37600 #	190000 #	80400 #
Lead	<0.7 mg/kg	TM181		109 M	20.2 #	80.6 M	22.1 M	369 M	21.4 M
Manganese	<0.13 mg/kg	TM181		7190 M	402 #	7410 M	2970 M	24500 M	8590 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 #	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.9 M	26.9 #	23.8 M	20.9 M	31.1 M	7.4 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<10 #	<10 #	10.5 #	<10 #
Vanadium	<0.2 mg/kg	TM181		98.3 #	18.6 #	125 #	43.6 #	414 #	244 #
Zinc	<1.9 mg/kg	TM181		467 M	50.1 #	222 M	81.3 M	1260 M	59.7 M

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		8.8	12	11	11	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0114 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0112 M	0.0112 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		6.15 #	8.79 #	6.5 #	3.34 #	7.43 #
pH	1 pH Units	TM133		11.7 M	11.4 M	11 M	12.1 M	11.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		17.8 M	9.45 M	6.58 M	9.05 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.04 M	0.673 M	2.4 M	0.735 M	1.95 M
Chromium	<0.9 mg/kg	TM181		155 M	115 M	451 M	237 M	184 M
Copper	<1.4 mg/kg	TM181		21.3 M	19.8 M	16.4 M	47.9 M	<14 M
Iron	<1000 mg/kg	TM181		183000 #	101000 #	174000 #	117000 #	160000 #
Lead	<0.7 mg/kg	TM181		35.6 M	68.4 M	57.8 M	102 M	11.1 M
Manganese	<0.13 mg/kg	TM181		13900 M	9310 M	26200 M	12300 M	10000 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		20.5 M	21 M	14.7 M	25.3 M	12.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		184 #	162 #	337 #	220 #	209 #
Zinc	<1.9 mg/kg	TM181		153 M	220 M	231 M	373 M	76.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.6	78.3	79.7	75	81.1	80.8
Acenaphthene-d10 % recovery**	%	TM218		80.4	81.9	80.5	79	82.9	80.8
Phenanthrene-d10 % recovery**	%	TM218		85	86.4	84.3	77.5	86.2	85.7
Chrysene-d12 % recovery**	%	TM218		86	95.4	91.7	74	85.8	87.7
Perylene-d12 % recovery**	%	TM218		79.2	89.5	90.9	73.5	74.4	79.4
Naphthalene	<9 µg/kg	TM218		217 M	11 M	<9 M	<450 M	232 M	329 M
Acenaphthylene	<12 µg/kg	TM218		<240 M	<12 M	<12 M	<600 M	85 M	75.6 M
Acenaphthene	<8 µg/kg	TM218		<160 M	67.9 M	<8 M	<400 M	22.9 M	17.5 M
Fluorene	<10 µg/kg	TM218		<200 M	82.4 M	<10 M	<500 M	62.2 M	58.8 M
Phenanthrene	<15 µg/kg	TM218		540 M	1450 M	54.5 M	4160 M	557 M	407 M
Anthracene	<16 µg/kg	TM218		<320 M	286 M	19.9 M	<800 M	148 M	112 M
Fluoranthene	<17 µg/kg	TM218		1120 M	1720 M	142 M	4720 M	1200 M	596 M
Pyrene	<15 µg/kg	TM218		864 M	1240 M	119 M	3890 M	969 M	468 M
Benz(a)anthracene	<14 µg/kg	TM218		577 M	601 M	85.4 M	1710 M	669 M	320 M
Chrysene	<10 µg/kg	TM218		456 M	495 M	88 M	2280 M	709 M	359 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		859 M	455 M	110 M	2540 M	977 M	474 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<280 M	160 M	33.6 M	<700 M	300 M	136 M
Benzo(a)pyrene	<15 µg/kg	TM218		480 M	259 M	67.3 M	1220 M	568 M	282 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		407 M	137 M	42.2 M	1310 M	434 M	229 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<460 M	36 M	<23 M	<1150 M	103 M	51.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<480 M	126 M	40.3 M	<1200 M	399 M	211 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5520	7130	801	21800	7430	4130

Validated

CERTIFICATE OF ANALYSIS

SDG: 210202-91 **Client Reference:** P18-669 **Report Number:** 586569
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.6	79.4	77.7	77.7	72.3	79.5
Acenaphthene-d10 % recovery**	%	TM218		79.4	77.9	81.3	80.5	77.9	81.7
Phenanthrene-d10 % recovery**	%	TM218		80.9	80.1	87.4	81	79.1	82.5
Chrysene-d12 % recovery**	%	TM218		77.2	75.5	92.4	78.8	85.5	85.8
Perylene-d12 % recovery**	%	TM218		74.3	72.6	82.8	70.2	76.4	81.2
Naphthalene	<9 µg/kg	TM218		87.2 M	85.9 M	722 M	249 M	1130 M	69.5 M
Acenaphthylene	<12 µg/kg	TM218		37.3 M	24.1 M	274 M	75.8 M	1710 M	21.8 M
Acenaphthene	<8 µg/kg	TM218		16.1 M	<8 M	<8 M	<8 M	<40 M	<8 M
Fluorene	<10 µg/kg	TM218		27 M	14.1 M	199 M	47 M	1980 M	15.1 M
Phenanthrene	<15 µg/kg	TM218		366 M	171 M	2070 M	516 M	12900 M	166 M
Anthracene	<16 µg/kg	TM218		88.5 M	39.9 M	524 M	143 M	3240 M	37.9 M
Fluoranthene	<17 µg/kg	TM218		672 M	264 M	2920 M	733 M	15400 M	235 M
Pyrene	<15 µg/kg	TM218		550 M	215 M	2140 M	567 M	10900 M	172 M
Benz(a)anthracene	<14 µg/kg	TM218		361 M	143 M	1190 M	320 M	5830 M	98 M
Chrysene	<10 µg/kg	TM218		391 M	156 M	1150 M	336 M	5380 M	104 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		591 M	235 M	1580 M	404 M	6680 M	119 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		208 M	70.9 M	464 M	123 M	2250 M	36.3 M
Benzo(a)pyrene	<15 µg/kg	TM218		371 M	138 M	904 M	227 M	4210 M	69.2 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		350 M	143 M	672 M	163 M	2960 M	51.6 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		70 M	26.5 M	150 M	37.8 M	655 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		318 M	132 M	627 M	157 M	2720 M	48.3 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4500	1860	15600	4100	78000	1240

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.3	82.2	79.7	81.8	79.9	81.2
Acenaphthene-d10 % recovery**	%	TM218		84.6	79.9	81.4	83.4	78.7	79.8
Phenanthrene-d10 % recovery**	%	TM218		84.3	81.5	86	85.2	80.7	81.5
Chrysene-d12 % recovery**	%	TM218		88	73.8	90	89.9	74.3	76.7
Perylene-d12 % recovery**	%	TM218		79.6	70	82.9	85.1	70.1	72.7
Naphthalene	<9 µg/kg	TM218		283 M	80.4 #	475 M	39.1 M	72 M	87.2 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	<12 #	371 M	<12 M	22.8 M	39.8 M
Acenaphthene	<8 µg/kg	TM218		<80 M	<8 #	<8 M	<8 M	27.5 M	9.59 M
Fluorene	<10 µg/kg	TM218		116 M	<10 #	225 M	<10 M	23.3 M	32.5 M
Phenanthrene	<15 µg/kg	TM218		864 M	166 #	2030 M	100 M	295 M	253 M
Anthracene	<16 µg/kg	TM218		233 M	<16 #	547 M	<16 M	65.3 M	61.2 M
Fluoranthene	<17 µg/kg	TM218		1450 M	48.6 #	4190 M	89.7 M	506 M	362 M
Pyrene	<15 µg/kg	TM218		1150 M	35 #	3200 M	67.6 M	438 M	279 M
Benz(a)anthracene	<14 µg/kg	TM218		763 M	20.4 #	2100 M	52 M	257 M	161 M
Chrysene	<10 µg/kg	TM218		866 M	35.5 #	2010 M	76.5 M	323 M	169 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1190 M	33.6 #	3070 M	77.3 M	459 M	226 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		340 M	<14 #	945 M	22.2 M	142 M	74.4 M
Benzo(a)pyrene	<15 µg/kg	TM218		725 M	<15 #	1930 M	45.2 M	239 M	132 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		559 M	<18 #	1540 M	38.3 M	242 M	118 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 M	<23 #	354 M	<23 M	49.1 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		549 M	<24 #	1480 M	40.2 M	223 M	110 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9080	420	24500	648	3390	2120

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		80.1	78.6	80.5	87.8	78.5
Acenaphthene-d10 % recovery**	%	TM218		79.9	82.6	82.5	86	81.6
Phenanthrene-d10 % recovery**	%	TM218		82.5	89	82.9	90.5	84.9
Chrysene-d12 % recovery**	%	TM218		79.6	94.8	78.4	111	91.5
Perylene-d12 % recovery**	%	TM218		75	85.5	73.4	102	88.5
Naphthalene	<9 µg/kg	TM218		297 M	609 M	508 M	131 M	146 M
Acenaphthylene	<12 µg/kg	TM218		64.4 M	194 M	184 M	77.6 M	59.3 M
Acenaphthene	<8 µg/kg	TM218		24.7 M	34.5 M	24.3 M	62.6 M	25.4 M
Fluorene	<10 µg/kg	TM218		54 M	154 M	162 M	77 M	47.6 M
Phenanthrene	<15 µg/kg	TM218		433 M	1350 M	1080 M	636 M	420 M
Anthracene	<16 µg/kg	TM218		109 M	364 M	231 M	144 M	132 M
Fluoranthene	<17 µg/kg	TM218		619 M	2020 M	1190 M	1270 M	706 M
Pyrene	<15 µg/kg	TM218		482 M	1510 M	852 M	1000 M	612 M
Benz(a)anthracene	<14 µg/kg	TM218		299 M	1050 M	437 M	701 M	330 M
Chrysene	<10 µg/kg	TM218		337 M	1110 M	454 M	668 M	363 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		428 M	1490 M	576 M	983 M	464 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		158 M	462 M	205 M	351 M	135 M
Benzo(a)pyrene	<15 µg/kg	TM218		243 M	847 M	322 M	553 M	272 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		220 M	681 M	281 M	426 M	208 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		48 M	161 M	60.1 M	86.2 M	45.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		201 M	628 M	250 M	401 M	198 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4020	12700	6820	7570	4160

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		79.6	133 4	92.7	51.1 4	58.1 4	72.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1110	<1000	<1000	27600	4250	1270
Aliphatics >C21-C35	<1000 µg/kg	TM414		2410	<1000	<1000	1010000	12600	3580
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1330000	1870	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	<5000	2370000	19000	5230
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		62700	<10000	<10000	3400000	49500	24600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2260	3770	<1000	18800	4960	2270
Aromatics > EC21-EC35	<1000 µg/kg	TM414		43200	3670	<1000	930000	21400	8870
Aromatics >EC35-EC44	<1000 µg/kg	TM414		12600	<1000	<1000	85300	3540	7870
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1530	<1000	<1000	<10000	<1000	4210
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		58100	8500	<5000	1030000	30500	19400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		58100	<10000	<10000	3400000	49500	24600
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 4	<20	<20 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		63.6 4	107	38.7 4	60.5 4	31.4 4	80.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	23.3 4	29.7 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	22.2 4	36.1 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2020	<1000	1290	1290	2650	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		6330	<1000	6190	5960	15100	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		28000	2290	41300	23700	49900	5370
Aliphatics >C35-C44	<1000 µg/kg	TM414		2020	<1000	11000	5390	19100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		39200	<5000	59800	36300	86800	5800
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		123000	40800	101000	54900	160000	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	14.4 4	24.5 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	1880	<1000	3450	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6460	<1000	10000	2190	14700	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		53100	25800	27400	15000	49800	1610
Aromatics >EC35-EC44	<1000 µg/kg	TM414		22800	11400	1320	<1000	4550	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5060	2010	<1000	<1000	1430	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		83400	37900	41500	18600	73500	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		123000	37900	101000	55000	160000	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	65.8 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	65.8 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		68.6 4	72	49.5 4	79.3	118	118
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2330	<1000	<1000	<1000	1260	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		14300	<1000	1390	<1000	11700	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		73900	<1000	13800	2530	76800	7910
Aliphatics >C35-C44	<1000 µg/kg	TM414		35400	<1000	2230	<1000	26100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		126000	<5000	17900	<5000	116000	8850
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	2590	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4300	<1000	32200	<1000	1390	1010
Aromatics > EC21-EC35	<1000 µg/kg	TM414		35300	<1000	76000	2230	14700	4240
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3160	<1000	8600	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		43600	<5000	120000	<5000	17300	6260
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		82.1	25.9 4	71.5	98.6	72.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	13.4	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		41.7	<10 4	61.6	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		38.4	<10 4	67.2	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		1220	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		8050	1530	1210	3470	1330
Aliphatics >C16-C21	<1000 µg/kg	TM414		19800	7720	5090	16200	47600
Aliphatics >C21-C35	<1000 µg/kg	TM414		76100	35700	25100	94200	22800
Aliphatics >C35-C44	<1000 µg/kg	TM414		30000	10500	8860	42400	12500
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		135000	55500	40200	156000	84200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		189000	81600	68800	190000	150000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		12.1	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		25.2	<10 4	44.8	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3640	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		11000	4110	3750	3490	12900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		36300	19800	20900	28300	41600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2150	1530	2890	1300	10400
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1120	<1000	2650
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		53700	26200	28600	33500	65900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		189000	81600	69000	190000	150000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		80.1	<50 4	142	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		80.1	<20 4	142	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	112	115	118	106	109
Toluene-d8**	%	TM116		96	99.1	98.3	93.2	97.3	99.1
4-Bromofluorobenzene**	%	TM116		95.7	96.5	97.8	88.1	90	97.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	110	100	100	99.3	111
Toluene-d8**	%	TM116		95.3	98	94.7	96.8	92.9	99.5
4-Bromofluorobenzene**	%	TM116		88.1	94.5	87.6	88	85.4	94.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	441 M	<260 M	320 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	113	102	113	110	112
Toluene-d8**	%	TM116		94.5	100	95.2	99.7	98.4	99.1
4-Bromofluorobenzene**	%	TM116		90.6	87.6	89.1	93.2	100	96.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		286 M	<260 #	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Dibromofluoromethane**	%	TM116		116	105	105	112	109
Toluene-d8**	%	TM116		96.2	94.1	95	99.4	97.7
4-Bromofluorobenzene**	%	TM116		95.4	79.1	87.6	94.7	94.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ21-1 0.30 - 0.30 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652632 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652642 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK22-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652548 TM048	08/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652657 TM048	08/02/21	Eva Guerra	bundle of fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P20-1 0.50 - 0.50 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652671 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652557 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q20-1 0.60 - 0.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652565 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652577 TM048	08/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	Q22-2 1.70 - 1.70 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652623 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652585 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-3 2.20 - 2.20 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652594 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R22-2 1.60 - 1.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652613 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	586569
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23652632	23652638	23652642	23652650	23652548	23652599	23652657	23652664	23652671	23652552
Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2	AL21-1	AL21-2	P20-1	P20-2
AGS Ref.										
Depth	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021

Lab Sample No(s)	23652557	23652561	23652565	23652571	23652577	23652581	23652618	23652623	23652585	23652589
Customer Sample Ref.	P21-1	P21-2	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2	R21-1	R21-2
AGS Ref.										
Depth	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	08-Feb-2021		09-Feb-2021		08-Feb-2021			09-Feb-2021	09-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021
pH	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	12-Feb-2021	12-Feb-2021	09-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	12-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021

Lab Sample No(s)	23652594	23652609	23652613
Customer Sample Ref.	R21-3	R22-1	R22-2
AGS Ref.			
Depth	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021
PAH by GCMS	04-Feb-2021	09-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
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BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	19 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210206-39
Your Reference:	P18-669
Location:	Llanwern
Report No:	587491

This report has been revised and directly supersedes 587296 in its entirety.

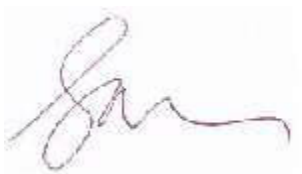
We received 16 samples on Saturday February 06, 2021 and 16 of these samples were scheduled for analysis which was completed on Friday February 19, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23677975	S16-1		0.90 - 0.90	04/02/2021
23678020	S16-2		2.20 - 2.20	04/02/2021
23678025	S18-1		0.70 - 0.70	04/02/2021
23678034	S19-1		1.00 - 1.00	04/02/2021
23678039	S19-2		2.00 - 2.00	04/02/2021
23677997	S21-1		0.50 - 0.50	05/02/2021
23678005	S21-2		1.80 - 1.80	05/02/2021
23678009	S22-1		0.50 - 0.50	05/02/2021
23678013	S22-2		1.30 - 1.30	05/02/2021
23677984	T21-1		1.00 - 1.00	05/02/2021
23677989	T21-2		2.00 - 2.00	05/02/2021
23678044	U19-1		0.30 - 0.30	05/02/2021
23678051	U20-1		0.80 - 0.80	05/02/2021
23678058	U20-2		1.30 - 1.30	05/02/2021
23678064	U21-1		0.50 - 0.50	05/02/2021
23677979	U21-2		1.40 - 1.40	05/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23677975		23678020		23678025		23678034		23678039		23677997		23678005		23678009				
Customer Sample Reference			S16-1		S16-2		S18-1		S19-1		S19-2		S21-1		S21-2		S22-1				
AGS Reference																					
Depth (m)			0.90 - 0.90		2.20 - 2.20		0.70 - 0.70		1.00 - 1.00		2.00 - 2.00		0.50 - 0.50		1.80 - 1.80		0.50 - 0.50				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 8	X					X					X			X					X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 2											X			X					
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 16			X		X			X		X			X			X		X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
PAH by GCMS	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
pH	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
Sample description	All	NDPs: 0 Tests: 15		X		X			X		X			X			X		X		
Total Organic Carbon	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 16		X		X			X		X			X			X		X		
VOC MS (S)	All	NDPs: 0 Tests: 16			X		X			X		X			X			X		X	

23677979	U21-2		1.40 - 1.40	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23678064	U21-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23678058	U20-2		1.30 - 1.30	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23678051	U20-1		0.80 - 0.80	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23678044	U19-1		0.30 - 0.30	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23677989	T21-2		2.00 - 2.00	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23677984	T21-1		1.00 - 1.00	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23678013	S22-2		1.30 - 1.30	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23678009	S22-1		0.50 - 0.50	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X		X	X	

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23677975	S16-1	0.90 - 0.90	Dark Brown	Loamy Sand	Stones	None
23678020	S16-2	2.20 - 2.20	Dark Brown	Sand	Stones	Crushed Brick
23678025	S18-1	0.70 - 0.70	Dark Brown	Sand	Stones	None
23678034	S19-1	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	Vegetation
23678039	S19-2	2.00 - 2.00	Dark Brown	Sand	Stones	Vegetation
23677997	S21-1	0.50 - 0.50	Dark Brown	Sandy Loam	Stones	Vegetation
23678005	S21-2	1.80 - 1.80	Dark Brown	Loamy Sand	Stones	Vegetation
23678009	S22-1	0.50 - 0.50	Dark Brown	Loamy Sand	Vegetation	Brick
23678013	S22-2	1.30 - 1.30	Dark Brown	Sandy Loam	Stones	Vegetation
23677984	T21-1	1.00 - 1.00	Dark Brown	Loamy Sand	Stones	None
23677989	T21-2	2.00 - 2.00	Dark Brown	Loamy Sand	Stones	Vegetation
23678044	U19-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	Vegetation
23678051	U20-1	0.80 - 0.80	Dark Brown	Loamy Sand	Stones	Coal fragments
23678058	U20-2	1.30 - 1.30	Dark Brown	Stone/Soil	Stones	Vegetation
23678064	U21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	Brick
23677979	U21-2	1.40 - 1.40	Dark Brown	Loamy Sand	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	19	11	14	16	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0113 M	<0.01 M	<0.01 M	0.0116 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	0.0116 M	0.0119 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		61.7 #	32.1 #	4.47 #	62.9 #	33.6 #	45.2 #
pH	1 pH Units	TM133		11.1 M	8.96 M	12.6 M	10.1 M	11 M	10.5 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	6.47 M	<6 M	7.62 M	9.93 M	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	0.459 M	<0.2 M	0.956 M
Chromium	<0.9 mg/kg	TM181		83.6 M	11.7 M	458 M	51 M	123 M	120 M
Copper	<1.4 mg/kg	TM181		<14 M	22.6 M	<14 M	<14 M	28 M	29.9 M
Iron	<1000 mg/kg	TM181		40100 #	24200 #	134000 #	34500 #	47100 #	59200 #
Lead	<0.7 mg/kg	TM181		22.2 M	20.2 M	9.23 M	66.1 M	64.8 M	52.4 M
Manganese	<0.13 mg/kg	TM181		4880 M	4100 M	29000 M	3280 M	8070 M	9620 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		8.99 M	19.9 M	2.79 M	11.7 M	18.1 M	10.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		94.1 #	31.1 #	458 #	57.3 #	134 #	245 #
Zinc	<1.9 mg/kg	TM181		55.3 M	73.8 M	60.5 M	88.3 M	113 M	183 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	<0.001 #
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	<0.001 #
Additional Asbestos Components (Using TM048)		TM304						None #	None #
Analysts Comments		TM304						N/A	0
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	<0.001 #

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	15	21	16	17	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0124 M	<0.01 M	0.0127 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		16.5 #	21.7 #	24.3 #	37.2 #	36.7 #	8.26 #
pH	1 pH Units	TM133		11.2 M	10.2 M	9.63 M	10.8 M	10.4 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.9 M	<6 M	11.6 M	<6 M	6.59 M	<6 M
Cadmium	<0.02 mg/kg	TM181		1.44 M	0.592 M	1.44 M	<0.2 M	0.597 M	0.889 M
Chromium	<0.9 mg/kg	TM181		182 M	133 M	85.7 M	44.9 M	179 M	476 M
Copper	<1.4 mg/kg	TM181		44.7 M	19.9 M	23.6 M	25.4 M	18.6 M	<14 M
Iron	<1000 mg/kg	TM181		70900 #	65500 #	122000 #	66400 #	59400 #	154000 #
Lead	<0.7 mg/kg	TM181		75 M	44.6 M	114 M	58 M	51.7 M	31.5 M
Manganese	<0.13 mg/kg	TM181		4170 M	6900 M	7740 M	2400 M	8280 M	28200 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		24.9 M	17.8 M	23.8 M	17.9 M	16.4 M	10.1 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	12 #
Vanadium	<0.2 mg/kg	TM181		101 #	122 #	183 #	48.5 #	245 #	409 #
Zinc	<1.9 mg/kg	TM181		239 M	89.9 M	353 M	127 M	107 M	86.1 M

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.4	15	11	13		
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 #	<12 M	<12 M		
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M		
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M		
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M		
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 #	<0.035 M	<0.035 M		
Soil Organic Matter (SOM)	<0.35 %	TM132		7.57 #	4.86 #	33.1 #	9.09 #		
pH	1 pH Units	TM133		10.9 M	10.1 #	9.8 M	10.4 M		
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M		
Arsenic	<0.6 mg/kg	TM181		<6 M	6.86 #	7.16 M	7.62 M		
Cadmium	<0.02 mg/kg	TM181		0.349 M	0.645 #	<0.2 M	0.892 M		
Chromium	<0.9 mg/kg	TM181		<9 M	64.2 #	21.5 M	14 M		
Copper	<1.4 mg/kg	TM181		<14 M	15.6 #	33.3 M	16.8 M		
Iron	<1000 mg/kg	TM181		17100 #	51900 #	215000 #	81800 #		
Lead	<0.7 mg/kg	TM181		24.6 M	424 #	169 M	91.7 M		
Manganese	<0.13 mg/kg	TM181		1380 M	6270 #	3200 M	6760 M		
Mercury	<0.1 mg/kg	TM181		<1 M	<1 #	<1 M	<1 M		
Nickel	<0.2 mg/kg	TM181		12.4 M	12.4 #	42 M	13.1 M		
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #		
Vanadium	<0.2 mg/kg	TM181		19.1 #	89.5 #	49.8 #	78.8 #		
Zinc	<1.9 mg/kg	TM181		57.9 M	95.3 #	117 M	108 M		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		101	98.6	95.8	104	82.9	79.9
Acenaphthene-d10 % recovery**	%	TM218		102	98.4	96.6	108	86.8	82.7
Phenanthrene-d10 % recovery**	%	TM218		101	98.2	94.5	98.6	87	86.4
Chrysene-d12 % recovery**	%	TM218		89.9	86.3	89.9	96.8	77.8	75.8
Perylene-d12 % recovery**	%	TM218		77.3	87.3	86.1	83.3	75.7	72.7
Naphthalene	<9 µg/kg	TM218		376 M	169 M	450 M	3270 M	3630 M	1170 M
Acenaphthylene	<12 µg/kg	TM218		28 M	39.1 M	61.8 M	1810 M	5690 M	464 M
Acenaphthene	<8 µg/kg	TM218		53.7 M	17.1 M	10.2 M	184 M	415 M	79.3 M
Fluorene	<10 µg/kg	TM218		150 M	43.7 M	55.8 M	1220 M	6780 M	751 M
Phenanthrene	<15 µg/kg	TM218		649 M	257 M	592 M	11800 M	36400 M	5970 M
Anthracene	<16 µg/kg	TM218		72.7 M	46.9 M	89.2 M	2370 M	7660 M	1380 M
Fluoranthene	<17 µg/kg	TM218		358 M	287 M	526 M	16900 M	42000 M	8180 M
Pyrene	<15 µg/kg	TM218		298 M	216 M	372 M	12000 M	28900 M	6080 M
Benz(a)anthracene	<14 µg/kg	TM218		165 M	120 M	233 M	7070 M	13700 M	3000 M
Chrysene	<10 µg/kg	TM218		286 M	131 M	248 M	6690 M	12000 M	2890 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		271 M	114 M	377 M	8550 M	15700 M	3730 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		78.3 M	51.6 M	118 M	3230 M	5310 M	1140 M
Benzo(a)pyrene	<15 µg/kg	TM218		135 M	98.8 M	185 M	5230 M	10100 M	2310 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		87.3 M	89.1 M	162 M	3040 M	7000 M	1890 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		34.4 M	<23 M	42.7 M	811 M	1170 M	365 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		127 M	82.9 M	179 M	3230 M	6440 M	1530 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		3170	1760	3700	87300	203000	40900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.7	98.5	97	82.1	82.6	98.9
Acenaphthene-d10 % recovery**	%	TM218		83.5	96.4	94.5	81.9	83.3	97
Phenanthrene-d10 % recovery**	%	TM218		86.1	97.5	96	83.2	84.2	97.8
Chrysene-d12 % recovery**	%	TM218		84.1	99.5	94.6	75.6	80.8	96.7
Perylene-d12 % recovery**	%	TM218		80.6	106	100	70.7	75.7	101
Naphthalene	<9 µg/kg	TM218		1130 M	577 M	649 M	720 M	420 M	282 M
Acenaphthylene	<12 µg/kg	TM218		226 M	604 M	347 M	269 M	210 M	98.6 M
Acenaphthene	<8 µg/kg	TM218		527 M	36.5 M	38.4 M	<40 M	19.8 M	<8 M
Fluorene	<10 µg/kg	TM218		460 M	463 M	220 M	194 M	131 M	55.9 M
Phenanthrene	<15 µg/kg	TM218		1650 M	3250 M	1910 M	1670 M	1130 M	1040 M
Anthracene	<16 µg/kg	TM218		436 M	1790 M	616 M	352 M	269 M	234 M
Fluoranthene	<17 µg/kg	TM218		1880 M	6500 M	3600 M	2120 M	1810 M	1600 M
Pyrene	<15 µg/kg	TM218		1460 M	4690 M	2660 M	1540 M	1330 M	1090 M
Benz(a)anthracene	<14 µg/kg	TM218		776 M	2500 M	1490 M	823 M	776 M	652 M
Chrysene	<10 µg/kg	TM218		775 M	2470 M	1270 M	859 M	793 M	680 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1030 M	3430 M	1610 M	1020 M	1030 M	617 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		324 M	1130 M	606 M	322 M	341 M	293 M
Benzo(a)pyrene	<15 µg/kg	TM218		673 M	2320 M	1340 M	627 M	660 M	505 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		474 M	1830 M	1060 M	448 M	498 M	429 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		90.9 M	335 M	194 M	<115 M	88.9 M	79.3 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		456 M	1580 M	929 M	445 M	494 M	378 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		12400	33500	18600	11400	10000	8040

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		104	102	91.2	84.5		
Acenaphthene-d10 % recovery**	%	TM218		101	98.4	94.9	85.6		
Phenanthrene-d10 % recovery**	%	TM218		97.1	98.4	94.4	87.6		
Chrysene-d12 % recovery**	%	TM218		93	95.5	89.8	84.5		
Perylene-d12 % recovery**	%	TM218		90.7	104	78.1	82.2		
Naphthalene	<9 µg/kg	TM218		157 M	55.6 #	1080 M	198 M		
Acenaphthylene	<12 µg/kg	TM218		<12 M	14.7 #	394 M	73.7 M		
Acenaphthene	<8 µg/kg	TM218		13.4 M	10.2 #	28.6 M	12.6 M		
Fluorene	<10 µg/kg	TM218		41 M	13.2 #	232 M	49.3 M		
Phenanthrene	<15 µg/kg	TM218		225 M	130 #	2850 M	403 M		
Anthracene	<16 µg/kg	TM218		32.6 M	23.7 #	758 M	96.6 M		
Fluoranthene	<17 µg/kg	TM218		114 M	173 #	5170 M	579 M		
Pyrene	<15 µg/kg	TM218		87.1 M	145 #	3580 M	428 M		
Benz(a)anthracene	<14 µg/kg	TM218		60 M	122 #	2220 M	284 M		
Chrysene	<10 µg/kg	TM218		97.2 M	146 #	1940 M	301 M		
Benzo(b)fluoranthene	<15 µg/kg	TM218		86.2 M	152 #	2870 M	398 M		
Benzo(k)fluoranthene	<14 µg/kg	TM218		19.6 M	73.4 #	893 M	140 M		
Benzo(a)pyrene	<15 µg/kg	TM218		44.8 M	145 #	1600 M	243 M		
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		31.3 M	139 #	1130 M	182 M		
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	28.2 #	266 M	37 M		
Benzo(g,h,i)perylene	<24 µg/kg	TM218		45 M	129 #	1050 M	210 M		
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		1050	1500	26100	3640		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		14.8 4	134 4	59 4	9 4	88.5	15.6 4
Aliphatics >C5-C6	<10 µg/kg	TM089		71.2 4	14.9 4	<10 4	<10 4	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		359 4	45.9 4	18.1 4	<10 4	29.8	14.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		295 4	64.5 4	42.9 4	<10 4	39.3	11.9 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		17600	<1000	<1000	2780	<1000	1270
Aliphatics >C12-C16	<1000 µg/kg	TM414		77200	8060	<1000	6670	1800	4620
Aliphatics >C16-C21	<1000 µg/kg	TM414		87500	15800	2800	19800	9370	10400
Aliphatics >C21-C35	<1000 µg/kg	TM414		60000	16600	37000	42500	32100	38700
Aliphatics >C35-C44	<1000 µg/kg	TM414		12000	3110	4790	6510	8590	10900
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		254000	43600	45200	78200	52200	66000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		323000	59500	59400	249000	120000	187000
Aromatics >EC5-EC7	<10 µg/kg	TM089		91.5 4	<10 4	<10 4	<10 4	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		115 4	11.2 4	<10 4	<10 4	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		197 4	42.2 4	28.3 4	<10 4	26.2	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		4410	<1000	<1000	4810	2530	2110
Aromatics > EC12-EC16	<1000 µg/kg	TM414		31500	2420	1860	12400	4920	7470
Aromatics > EC16-EC21	<1000 µg/kg	TM414		14500	2830	1930	48400	19700	27800
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17200	9700	9170	100000	38200	77400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	4810	2880	6620
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		68800	16000	14200	171000	68300	121000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		324000	59700	59500	249000	121000	188000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		725 4	125 4	61 4	<50 4	69	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		403 4	53.3 4	<50 4	<50 4	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		1130 4	179 4	61 4	<20 4	69	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		15.4 4	73	44.8 4	26 4	31.1 4	56.2 4
Aliphatics >C5-C6	<10 µg/kg	TM089		13.6 4	<10	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		65.7 4	32.8	27.9 4	<10 4	13.3 4	11.3 4
Aliphatics >C8-C10	<10 µg/kg	TM089		68.2 4	55	33 4	<10 4	12.1 4	12.4 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1580	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		10400	<1000	<1000	2950	3740	1500
Aliphatics >C16-C21	<1000 µg/kg	TM414		29900	<1000	3020	4120	5800	5900
Aliphatics >C21-C35	<1000 µg/kg	TM414		90400	2400	11100	10600	19300	59600
Aliphatics >C35-C44	<1000 µg/kg	TM414		21200	<1000	3300	2850	4450	10200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		153000	<5000	19000	21500	34900	77200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		226000	52400	84100	54800	84800	93000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		44.6 4	36.3	21.6 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1380	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9270	<1000	1720	3900	5130	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		19900	14000	17600	7530	12300	2430
Aromatics > EC21-EC35	<1000 µg/kg	TM414		41600	31200	41900	18600	30600	11700
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1290	2610	3230	2390	1140	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		73400	48700	65200	33300	49900	15800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		226000	48700	84200	54800	84800	93000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		148 4	87.8	61 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		148 4	87.8	61 4	<20 4	<20 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		87	122	15 4	81		
Aliphatics >C5-C6	<10 µg/kg	TM089		14.2	<10	<10 4	17.3		
Aliphatics >C6-C8	<10 µg/kg	TM089		66.6	<10	<10 4	84		
Aliphatics >C8-C10	<10 µg/kg	TM089		50.2	<10	<10 4	109		
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	1150	<1000		
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	3640	4230		
Aliphatics >C16-C21	<1000 µg/kg	TM414		2150	<1000	6390	14400		
Aliphatics >C21-C35	<1000 µg/kg	TM414		21000	1470	18600	28900		
Aliphatics >C35-C44	<1000 µg/kg	TM414		7370	<1000	4230	6140		
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		31500	<5000	34000	54400		
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		40900	11500	85100	84200		
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10		
Aromatics >EC7-EC8	<10 µg/kg	TM089		27.3	<10	<10 4	16.1		
Aromatics >EC8-EC10	<10 µg/kg	TM089		32.7	<10	<10 4	72.5		
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	3780	1020		
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1230	<1000	11000	5290		
Aromatics > EC21-EC35	<1000 µg/kg	TM414		6190	7650	34400	22200		
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	1160	1030		
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000		
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		9410	9250	51100	29800		
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		41100	<10000	85100	84500		
Total Aliphatics >C5-C10	<50 µg/kg	TM089		131	<50	<50 4	210		
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		60	<50	<50 4	88.6		
GRO >C5-C10	<20 µg/kg	TM089		191	<20	<20 4	299		

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1
			Depth (m)	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	04/02/2021	04/02/2021	04/02/2021	04/02/2021	04/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23677975	23678020	23678025	23678034	23678039	23677997
			AGS Reference						
Dibromofluoromethane**	%	TM116		100	112	98.8	96.7	104	109
Toluene-d8**	%	TM116		92.9	97.6	96.1	88.3	94.8	95.7
4-Bromofluorobenzene**	%	TM116		76.8	94.3	89.9	72.2	87.7	86.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<2000 M
Benzene	<9 µg/kg	TM116		205 M	<180 M	<180 M	<180 M	<180 M	<1800 M
Toluene	<7 µg/kg	TM116		380 M	<140 M	<140 M	<140 M	<140 M	<1400 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<800 M
p/m-Xylene	<10 µg/kg	TM116		271 #	<200 #	<200 #	<200 #	<200 #	<2000 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<2000 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	341 M	337 M	4140 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<4
Sum of BTEX	<40 µg/kg	TM116		856	<800	<800	<800	<800	<8000

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	S21-2	S22-1	S22-2	T21-1	T21-2	U19-1
			Depth (m)	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00	2.00 - 2.00	0.30 - 0.30
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021	05/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021	06/02/2021
			SDG Ref	210206-39	210206-39	210206-39	210206-39	210206-39	210206-39
			Lab Sample No.(s)	23678005	23678009	23678013	23677984	23677989	23678044
			AGS Reference						
Dibromofluoromethane**	%	TM116		105	105	97.9	108	108	106
Toluene-d8**	%	TM116		95.1	95.7	95.3	99.7	101	97
4-Bromofluorobenzene**	%	TM116		82.9	88.2	82.3	98.4	96.9	92.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<2000 M	<2000 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<1800 M	<1800 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<1400 M	<1400 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<800 M	<800 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<2000 #	<2000 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<2000 M	<2000 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<2600 M	<2600 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<4	<4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<8000	<8000	<800

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	U20-1	U20-2	U21-1	U21-2		
			Depth (m)	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40		
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)		
			Date Sampled	05/02/2021	05/02/2021	05/02/2021	05/02/2021		
			Sample Time	.	.	.	.		
			Date Received	06/02/2021	06/02/2021	06/02/2021	06/02/2021		
			SDG Ref	210206-39	210206-39	210206-39	210206-39		
			Lab Sample No.(s)	23678051	23678058	23678064	23677979		
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	112	98	109		
Toluene-d8**	%	TM116		98.6	97.9	93.3	97.1		
4-Bromofluorobenzene**	%	TM116		91.1	95.2	79	90.6		
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M		
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M		
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M		
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M		
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #		
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M		
Naphthalene	<13 µg/kg	TM116		<260 M	<260 #	<260 M	<260 M		
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4		
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800		

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S16-1 0.90 - 0.90 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677975 TM048	15/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S18-1 0.70 - 0.70 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678025 TM048	12/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S19-2 2.00 - 2.00 SOLID 04/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678039 TM048	15/02/2021	Marcin Magdziarek	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S21-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677997 TM048	12/02/2021	Marcin Magdziarek	Soil containing ACM debris	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	S22-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678009 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	T21-1 1.00 - 1.00 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23677984 TM048	15/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	U20-1 0.80 - 0.80 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678051 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	U21-1 0.50 - 0.50 SOLID 05/02/2021 00:00:00 06/02/2021 05:00:00 210206-39 23678064 TM048	12/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	S19-2	None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	2.00 - 2.00					
Sample Type	SOLID					
Date Sampled	04/02/2021 00:00:00					
Date Received	06/02/2021 05:00:00					
SDG	210206-39					
Original Sample	23678039					
Method Number	TM304					
Cust. Sample Ref.	S21-1	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Depth (m)	0.50 - 0.50					
Sample Type	SOLID					
Date Sampled	05/02/2021 00:00:00					
Date Received	06/02/2021 05:00:00					
SDG	210206-39					
Original Sample	23677997					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210206-39	**Client Reference:**	P18-669	**Report Number:**	587491
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	587296

Test Completion Dates

Lab Sample No(s)	23677975	23678020	23678025	23678034	23678039	23677997	23678005	23678009	23678013	23677984
Customer Sample Ref.	S16-1	S16-2	S18-1	S19-1	S19-2	S21-1	S21-2	S22-1	S22-2	T21-1
AGS Ref.										
Depth	0.90 - 0.90	2.20 - 2.20	0.70 - 0.70	1.00 - 1.00	2.00 - 2.00	0.50 - 0.50	1.80 - 1.80	0.50 - 0.50	1.30 - 1.30	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Asbestos ID in Solid Samples	15-Feb-2021		12-Feb-2021		15-Feb-2021	12-Feb-2021		12-Feb-2021		15-Feb-2021
Asbestos Quantification - Full					19-Feb-2021	18-Feb-2021				
Cyanide Comp/Free/Total/Thiocyanate	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
EPH CWG GC (S)	11-Feb-2021	11-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	10-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021
GRO by GC-FID (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Metals in solid samples by OES	11-Feb-2021	11-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021	12-Feb-2021	15-Feb-2021	15-Feb-2021	11-Feb-2021
PAH by GCMS	15-Feb-2021	11-Feb-2021	12-Feb-2021	16-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021	11-Feb-2021
pH	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Phenols by HPLC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Sample description	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Total Organic Carbon	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	15-Feb-2021
TPH CWG GC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
VOC MS (S)	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	14-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	14-Feb-2021

Lab Sample No(s)	23677989	23678044	23678051	23678058	23678064	23677979
Customer Sample Ref.	T21-2	U19-1	U20-1	U20-2	U21-1	U21-2
AGS Ref.						
Depth	2.00 - 2.00	0.30 - 0.30	0.80 - 0.80	1.30 - 1.30	0.50 - 0.50	1.40 - 1.40
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Asbestos ID in Solid Samples			12-Feb-2021		12-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
EPH CWG GC (S)	10-Feb-2021	10-Feb-2021	11-Feb-2021	10-Feb-2021	11-Feb-2021	11-Feb-2021
GRO by GC-FID (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Metals in solid samples by OES	15-Feb-2021	15-Feb-2021	12-Feb-2021	15-Feb-2021	11-Feb-2021	15-Feb-2021
PAH by GCMS	11-Feb-2021	11-Feb-2021	15-Feb-2021	11-Feb-2021	12-Feb-2021	11-Feb-2021
pH	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Phenols by HPLC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
Sample description	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
Total Organic Carbon	15-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021
TPH CWG GC (S)	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021	15-Feb-2021
VOC MS (S)	14-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021	12-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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

Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	24 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210212-101
Your Reference:	P18-669
Location:	Llanwern
Report No:	587965

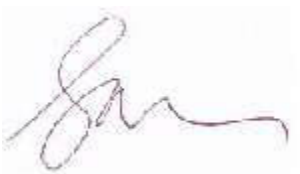
We received 19 samples on Friday February 12, 2021 and 19 of these samples were scheduled for analysis which was completed on Tuesday February 23, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan
Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23716424	SPLA-1		0.20 - 0.20	11/02/2021
23716430	SPLA-2		0.20 - 0.20	11/02/2021
23716436	SPLA-3		0.20 - 0.20	11/02/2021
23716443	SPLA-4		0.20 - 0.20	11/02/2021
23716403	SPLP-1		0.20 - 0.20	11/02/2021
23716409	SPLP-2		0.20 - 0.20	11/02/2021
23716417	SPLP-3		0.20 - 0.20	11/02/2021
23716468	W213-1		0.20 - 0.20	11/02/2021
23716473	W213-2		0.20 - 0.20	11/02/2021
23716480	W213-3		0.20 - 0.20	11/02/2021
23716485	W213-4		0.20 - 0.20	11/02/2021
23716489	W213-5		0.20 - 0.20	11/02/2021
23716387	W213-6		0.20 - 0.20	11/02/2021
23716392	W213-7		0.20 - 0.20	11/02/2021
23716399	W213-8		0.20 - 0.20	11/02/2021
23716382	W300-1		0.20 - 0.20	11/02/2021
23716449	W300-2		0.20 - 0.20	11/02/2021
23716453	W300-3		0.20 - 0.20	11/02/2021
23716459	W300-4		0.20 - 0.20	11/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend

X Test

N No Determination Possible

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

			Lab Sample No(s)	23716424	23716430	23716436	23716443	23716403	23716409	23716417	23716468
			Customer Sample Reference	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2	SPLP-3	W213-1
			AGS Reference								
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Container	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)
			Sample Type	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10				X					X			X					X			X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
EPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19			X			X		X			X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
PAH by GCMS	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
pH	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
Sample description	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
Total Organic Carbon	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
TPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X			X			X		X			X		
VOC MS (S)	All	NDPs: 0 Tests: 19			X			X		X			X			X		X			X	

23716382	W300-1		0.20 - 0.20	250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X											
23716399	W213-8		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
23716392	W213-7		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X											
23716387	W213-6		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
23716489	W213-5		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X											
23716485	W213-4		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
23716480	W213-3		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X											
23716473	W213-2		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	
23716468	W213-1		0.20 - 0.20	60g VOC (ALE215)	S					X								X
				250g Amber Jar (ALE210)	S	X		X	X		X	X	X	X	X	X	X	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

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

Lab Sample No(s)			23716382	23716449		23716453		23716459	
Customer Sample Reference			W300-1	W300-2		W300-3		W300-4	
AGS Reference									
Depth (m)			0.20 - 0.20	0.20 - 0.20		0.20 - 0.20		0.20 - 0.20	
Container			60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 19		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10				X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 19		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 19	X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 19		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 19		X			X		X	
pH	All	NDPs: 0 Tests: 19		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 19		X			X		X	
Sample description	All	NDPs: 0 Tests: 19		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 19		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 19		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 19	X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23716424	SPLA-1	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23716430	SPLA-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716436	SPLA-3	0.20 - 0.20	Grey	Sandy Clay Loam	Stones	Vegetation
23716443	SPLA-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716403	SPLP-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716409	SPLP-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716417	SPLP-3	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Vegetation
23716468	W213-1	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716473	W213-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716480	W213-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716485	W213-4	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716489	W213-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716387	W213-6	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716392	W213-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716399	W213-8	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716382	W300-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716449	W300-2	0.20 - 0.20	Dark Brown	Sand	Stones	Vegetation
23716453	W300-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23716459	W300-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		32	22	35	27	27	20
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0137 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.34 #	9.22 #	3.71 #	15.9 #	31.2 #	6.78 #
pH	1 pH Units	TM133		7.89 M	8.44 M	8.18 M	8.31 M	8.57 M	9.36 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		12.1 M	18.7 M	13.5 M	10.4 M	9.96 M	12.2 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	1.09 M	<0.2 M	0.706 M	0.826 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		38.6 M	32.1 M	39.8 M	22.4 M	90.8 M	50.9 M
Copper	<1.4 mg/kg	TM181		18.6 M	13 M	<14 M	25.2 M	12.3 M	25.8 M
Iron	<1000 mg/kg	TM181		75000 #	129000 #	47200 #	21300 #	93700 #	98100 #
Lead	<0.7 mg/kg	TM181		36.6 M	32.7 M	32.8 M	56 M	19.8 M	85.6 M
Manganese	<0.13 mg/kg	TM181		1590 M	2120 M	772 M	1760 M	11600 M	3540 M
Mercury	<0.1 mg/kg	TM181		<1 M	0.154 M	<1 M	<0.1 M	<0.1 M	<1 M
Nickel	<0.2 mg/kg	TM181		33.4 M	24.6 M	39.6 M	22.2 M	14.5 M	25.8 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<10 #	<1 #	3.31 #	<10 #
Vanadium	<0.2 mg/kg	TM181		63.8 #	80.8 #	57.3 #	28.4 #	192 #	101 #
Zinc	<1.9 mg/kg	TM181		135 M	129 M	133 M	254 M	74.2 M	267 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		28	13	12	18	9.8	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		11.1 #	6.74 #	7.69 #	6.02 #	22.2 #	8.21 #
pH	1 pH Units	TM133		8.52 M	8.9 M	8.74 M	8.59 M	8.63 M	8.86 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	2.04 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		11 M	14.4 M	13.1 M	20.2 M	9.93 M	67 M
Cadmium	<0.02 mg/kg	TM181		0.856 M	1.11 M	0.356 M	1.39 M	<0.2 M	0.577 M
Chromium	<0.9 mg/kg	TM181		312 M	59.7 M	50 M	68.5 M	34.2 M	18.6 M
Copper	<1.4 mg/kg	TM181		21.6 M	31.8 M	81.9 M	30.7 M	27.8 M	91.4 M
Iron	<1000 mg/kg	TM181		116000 #	65400 #	52400 #	76900 #	33400 #	45900 #
Lead	<0.7 mg/kg	TM181		21.5 M	90.7 M	142 M	121 M	42.6 M	253 M
Manganese	<0.13 mg/kg	TM181		14300 M	4490 M	2850 M	4420 M	2050 M	657 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<1 M	<0.1 M	<1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		24.1 M	21.7 M	27.2 M	31.9 M	18.9 M	24.5 M
Selenium	<1 mg/kg	TM181		3.43 #	1.1 #	<10 #	<1 #	<10 #	<1 #
Vanadium	<0.2 mg/kg	TM181		701 #	61.6 #	91.2 #	142 #	45.4 #	34 #
Zinc	<1.9 mg/kg	TM181		148 M	267 M	376 M	401 M	103 M	207 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	14	11	10	14	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0113 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0113 M	0.0111 M	0.0116 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.55 #	7.76 #	25.2 #	2.6 #	2.67 #	5.6 #
pH	1 pH Units	TM133		8.56 M	8.68 M	10.7 M	8.95 M	10.2 M	9.46 M
Cyanide, Total	<1 mg/kg	TM153		1.43 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		14.6 M	13 M	6.51 M	4.93 M	17.7 M	47.2 M
Cadmium	<0.02 mg/kg	TM181		0.326 M	1.39 M	<0.2 M	0.281 M	<0.2 M	1.28 M
Chromium	<0.9 mg/kg	TM181		111 M	162 M	267 M	9.54 M	256 M	127 M
Copper	<1.4 mg/kg	TM181		29.7 M	26.3 M	20.8 M	12.3 M	34.9 M	52.8 M
Iron	<1000 mg/kg	TM181		86800 #	86900 #	105000 #	10500 #	169000 #	119000 #
Lead	<0.7 mg/kg	TM181		174 M	85.1 M	54.2 M	62.1 M	79.9 M	89.5 M
Manganese	<0.13 mg/kg	TM181		5460 M	12000 M	12600 M	271 M	11300 M	9550 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 M	<1 M	<0.1 M	<1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		28.5 M	19.3 M	13.3 M	9.02 M	22.8 M	20.3 M
Selenium	<1 mg/kg	TM181		<10 #	3.36 #	<10 #	<1 #	<10 #	1.35 #
Vanadium	<0.2 mg/kg	TM181		164 #	385 #	380 #	11.2 #	252 #	156 #
Zinc	<1.9 mg/kg	TM181		400 M	278 M	141 M	58 M	225 M	444 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Customer Sample Ref.	W300-4
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	11/02/2021
Sample Time	.
Date Received	12/02/2021
SDG Ref	210212-101
Lab Sample No.(s)	23716459
AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	15
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 M
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	0.0234 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132	2.78 #
pH	1 pH Units	TM133	8.97 M
Cyanide, Total	<1 mg/kg	TM153	<1 M
Arsenic	<0.6 mg/kg	TM181	10.5 M
Cadmium	<0.02 mg/kg	TM181	1.64 M
Chromium	<0.9 mg/kg	TM181	100 M
Copper	<1.4 mg/kg	TM181	17.7 M
Iron	<1000 mg/kg	TM181	174000 #
Lead	<0.7 mg/kg	TM181	66.4 M
Manganese	<0.13 mg/kg	TM181	7920 M
Mercury	<0.1 mg/kg	TM181	<0.1 M
Nickel	<0.2 mg/kg	TM181	17.1 M
Selenium	<1 mg/kg	TM181	<1 #
Vanadium	<0.2 mg/kg	TM181	147 #
Zinc	<1.9 mg/kg	TM181	344 M

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		96.9	93.2	92.9	93.7	93.8	98.2
Acenaphthene-d10 % recovery**	%	TM218		97.5	93.2	90.9	93.7	93	97.7
Phenanthrene-d10 % recovery**	%	TM218		100	86.9	85.6	92.6	89	101
Chrysene-d12 % recovery**	%	TM218		82.8	85.8	87.5	90.3	88.1	89.8
Perylene-d12 % recovery**	%	TM218		81.1	84.3	90.8	88.2	92	87.5
Naphthalene	<9 µg/kg	TM218		41.3 M	184 M	<9 M	409 M	56.4 M	1300 M
Acenaphthylene	<12 µg/kg	TM218		20 M	78.3 M	<12 M	213 M	<12 M	933 M
Acenaphthene	<8 µg/kg	TM218		<8 M	<8 M	<8 M	24.9 M	17 M	157 M
Fluorene	<10 µg/kg	TM218		<10 M	44.4 M	<10 M	153 M	23.2 M	1270 M
Phenanthrene	<15 µg/kg	TM218		67.2 M	262 M	<15 M	990 M	178 M	7770 M
Anthracene	<16 µg/kg	TM218		<16 M	73.9 M	<16 M	273 M	37.3 M	1610 M
Fluoranthene	<17 µg/kg	TM218		171 M	466 M	<17 M	1680 M	248 M	10200 M
Pyrene	<15 µg/kg	TM218		122 M	342 M	<15 M	1230 M	211 M	7290 M
Benz(a)anthracene	<14 µg/kg	TM218		74.6 M	256 M	<14 M	713 M	115 M	3450 M
Chrysene	<10 µg/kg	TM218		67.6 M	217 M	<10 M	552 M	102 M	2800 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		94.4 M	381 M	<15 M	973 M	161 M	4780 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		29.2 M	135 M	<14 M	324 M	53.3 M	1470 M
Benzo(a)pyrene	<15 µg/kg	TM218		58.5 M	238 M	<15 M	581 M	108 M	2850 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		47.1 M	215 M	<18 M	449 M	79.5 M	2320 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<23 M	34.6 M	<23 M	71.4 M	<23 M	471 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		40.3 M	180 M	<24 M	367 M	70.4 M	1980 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		834	3110	<118	9000	1460	50600

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.5	93.1	91.7	91.4	93.1	95.8
Acenaphthene-d10 % recovery**	%	TM218		98.3	88.1	91.2	87.1	98	92.2
Phenanthrene-d10 % recovery**	%	TM218		103	85.6	87.9	87.3	95.3	88
Chrysene-d12 % recovery**	%	TM218		87	82.7	88.4	89.7	83.5	75.6
Perylene-d12 % recovery**	%	TM218		85.2	77.7	83	88.6	77.9	70.2
Naphthalene	<9 µg/kg	TM218		215 M	181 M	160 M	304 M	431 M	<180 M
Acenaphthylene	<12 µg/kg	TM218		117 M	137 M	215 M	265 M	277 M	<240 M
Acenaphthene	<8 µg/kg	TM218		22.8 M	230 M	121 M	334 M	21.1 M	<160 M
Fluorene	<10 µg/kg	TM218		82.6 M	212 M	236 M	439 M	198 M	<200 M
Phenanthrene	<15 µg/kg	TM218		637 M	1740 M	1800 M	2920 M	1940 M	989 M
Anthracene	<16 µg/kg	TM218		185 M	452 M	1110 M	808 M	478 M	<320 M
Fluoranthene	<17 µg/kg	TM218		1310 M	4590 M	12700 M	5250 M	3700 M	1980 M
Pyrene	<15 µg/kg	TM218		966 M	3610 M	10400 M	3730 M	2580 M	1510 M
Benz(a)anthracene	<14 µg/kg	TM218		520 M	2580 M	9050 M	2900 M	1100 M	1120 M
Chrysene	<10 µg/kg	TM218		426 M	2410 M	9160 M	2600 M	982 M	1110 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		747 M	3850 M	12300 M	4250 M	1400 M	1850 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		245 M	1480 M	4190 M	1270 M	476 M	606 M
Benzo(a)pyrene	<15 µg/kg	TM218		448 M	2310 M	7010 M	2440 M	779 M	954 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		339 M	1730 M	4940 M	1930 M	690 M	792 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		74.8 M	337 M	1050 M	362 M	124 M	<460 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		303 M	1450 M	3810 M	1570 M	581 M	686 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6640	27300	78200	31400	15800	11600

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.3	101	95.2	94.6	96.2	91.6
Acenaphthene-d10 % recovery**	%	TM218		89.3	103	98.4	92.3	97.3	91.5
Phenanthrene-d10 % recovery**	%	TM218		85.7	103	102	87.9	102	91.6
Chrysene-d12 % recovery**	%	TM218		84.2	83.1	81.3	85.9	83.6	99.5
Perylene-d12 % recovery**	%	TM218		80.2	79.7	75.5	83.7	80.9	100
Naphthalene	<9 µg/kg	TM218		248 M	307 M	8430 M	102 M	63.7 M	129 M
Acenaphthylene	<12 µg/kg	TM218		195 M	201 M	1290 M	58.9 M	35.5 M	52.2 M
Acenaphthene	<8 µg/kg	TM218		99.7 M	<80 M	268 M	19.9 M	29.6 M	14.9 M
Fluorene	<10 µg/kg	TM218		141 M	125 M	838 M	59.2 M	27.6 M	33.6 M
Phenanthrene	<15 µg/kg	TM218		1090 M	990 M	5740 M	476 M	372 M	298 M
Anthracene	<16 µg/kg	TM218		314 M	289 M	1810 M	121 M	105 M	78.6 M
Fluoranthene	<17 µg/kg	TM218		2660 M	2600 M	8490 M	662 M	794 M	513 M
Pyrene	<15 µg/kg	TM218		2040 M	1970 M	6290 M	489 M	665 M	398 M
Benz(a)anthracene	<14 µg/kg	TM218		1660 M	1360 M	3520 M	338 M	430 M	315 M
Chrysene	<10 µg/kg	TM218		1510 M	1440 M	3580 M	299 M	451 M	276 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2670 M	2260 M	4870 M	514 M	723 M	489 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		961 M	772 M	1600 M	188 M	250 M	154 M
Benzo(a)pyrene	<15 µg/kg	TM218		1640 M	1270 M	3220 M	318 M	439 M	284 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		1340 M	1090 M	2530 M	275 M	359 M	233 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		230 M	276 M	549 M	43.9 M	78.1 M	41.6 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1140 M	990 M	2310 M	262 M	370 M	214 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		17900	15900	55300	4230	5190	3520

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

PAH by GCMS

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Customer Sample Ref.	W300-4
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	11/02/2021
Sample Time	.
Date Received	12/02/2021
SDG Ref	210212-101
Lab Sample No.(s)	23716459
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	94.6
Acenaphthene-d10 % recovery**	%	TM218	91.7
Phenanthrene-d10 % recovery**	%	TM218	83.8
Chrysene-d12 % recovery**	%	TM218	82.2
Perylene-d12 % recovery**	%	TM218	81.5
Naphthalene	<9 µg/kg	TM218	167 M
Acenaphthylene	<12 µg/kg	TM218	71 M
Acenaphthene	<8 µg/kg	TM218	23.3 M
Fluorene	<10 µg/kg	TM218	44.4 M
Phenanthrene	<15 µg/kg	TM218	459 M
Anthracene	<16 µg/kg	TM218	98.9 M
Fluoranthene	<17 µg/kg	TM218	744 M
Pyrene	<15 µg/kg	TM218	571 M
Benz(a)anthracene	<14 µg/kg	TM218	399 M
Chrysene	<10 µg/kg	TM218	433 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	730 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	210 M
Benzo(a)pyrene	<15 µg/kg	TM218	433 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	346 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	73.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	327 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	5130

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		74.1	125	70.9	90	79	82.8
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3770	1090
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	4780	<1000	2370	11000	5670
Aliphatics >C21-C35	<1000 µg/kg	TM414		2020	19700	1560	14100	30800	20700
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	3390	<1000	2560	6470	3760
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	28100	<5000	19000	52000	31300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		10900	49800	<10000	55500	86200	109000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1090
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1670
Aromatics > EC16-EC21	<1000 µg/kg	TM414		<1000	2090	<1000	5920	2750	14300
Aromatics > EC21-EC35	<1000 µg/kg	TM414		7860	17600	1360	24500	27500	54000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	1860	<1000	5150	3280	6340
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1020
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		8860	21800	<5000	36500	34200	77400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		<10000	49800	<10000	55500	86200	109000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		84	80.5	88.3	86.9	34 4	82.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3270	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	11300	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1480	1150	3670	1620	50500	1730
Aliphatics >C21-C35	<1000 µg/kg	TM414		3920	4520	10700	11700	2660000	6160
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	2070	319000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		5400	6440	14900	15700	3040000	8340
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		29500	147000	68000	69500	3090000	204000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1970	<1000	<1000	4440	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6920	20100	4800	7800	15300	7290
Aromatics > EC21-EC35	<1000 µg/kg	TM414		15600	108000	35700	40200	24800	183000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	10200	12400	4940	<1000	5270
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1870	3820	1170	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		24100	141000	53200	53800	46200	196000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		29500	147000	68000	69500	3090000	204000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20 4	<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		101	70.3	20 4	107	112	94.5
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	3160	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1410	1160	17300	<1000	6060	1560
Aliphatics >C21-C35	<1000 µg/kg	TM414		10500	8800	42200	23300	54500	24300
Aliphatics >C35-C44	<1000 µg/kg	TM414		1140	<1000	12000	5000	18500	6460
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		13300	10600	74900	29100	79500	32500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		85900	62500	228000	36900	99200	47000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	9950	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1230	6320	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		10700	9350	33400	<1000	1810	1310
Aromatics > EC21-EC35	<1000 µg/kg	TM414		55000	38100	93200	5460	16100	11300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		6290	2870	10400	1430	1770	1670
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1270	<1000	1690	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		72600	51800	153000	7860	19800	14400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		85900	62500	228000	36900	99200	47000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

TPH CWG (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Depth (m)	Sample Type	Date Sampled	Sample Time	Date Received	SDG Ref	Lab Sample No.(s)	AGS Reference
			W300-4	0.20 - 0.20	Soil/Solid (S)	11/02/2021	.	12/02/2021	210212-101	23716459	
GRO Surrogate % recovery**	%	TM089	80.1								
Aliphatics >C5-C6	<10 µg/kg	TM089	<10								
Aliphatics >C6-C8	<10 µg/kg	TM089	<10								
Aliphatics >C8-C10	<10 µg/kg	TM089	<10								
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000								
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000								
Aliphatics >C16-C21	<1000 µg/kg	TM414	1480								
Aliphatics >C21-C35	<1000 µg/kg	TM414	21400								
Aliphatics >C35-C44	<1000 µg/kg	TM414	4470								
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	27400								
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	80700								
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10								
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10								
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10								
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000								
Aromatics > EC12-EC16	<1000 µg/kg	TM414	1810								
Aromatics > EC16-EC21	<1000 µg/kg	TM414	20300								
Aromatics > EC21-EC35	<1000 µg/kg	TM414	28800								
Aromatics >EC35-EC44	<1000 µg/kg	TM414	2210								
Aromatics > EC40-EC44	<1000 µg/kg	TM414	<1000								
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	53300								
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	80700								
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50								
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50								
GRO >C5-C10	<20 µg/kg	TM089	<20								

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716424	23716430	23716436	23716443	23716403	23716409
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	107	112	106	106	107
Toluene-d8**	%	TM116		95.6	95.7	94.4	97.8	97.9	98.1
4-Bromofluorobenzene**	%	TM116		88.7	90	87.3	94	93.9	96.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPLP-3	W213-1	W213-2	W213-3	W213-4	W213-5
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716417	23716468	23716473	23716480	23716485	23716489
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	105	106	105	99.5	108
Toluene-d8**	%	TM116		98.3	96.6	97.3	96.3	91.2	96.9
4-Bromofluorobenzene**	%	TM116		97.4	90.9	93.9	92	81.3	92.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
			SDG Ref	210212-101	210212-101	210212-101	210212-101	210212-101	210212-101
			Lab Sample No.(s)	23716387	23716392	23716399	23716382	23716449	23716453
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	106	90.8	105	105	106
Toluene-d8**	%	TM116		97.3	98	91.5	97.5	97.4	98.8
4-Bromofluorobenzene**	%	TM116		91	95.1	77.8	93.7	94	96.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	1770 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG: 210212-101 Client Reference: P18-669 Report Number: 587965
Location: Llanwern Order Number: 108282 Superseded Report:

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4♦§@	Sample deviation (see appendix)

Customer Sample Ref.	W300-4
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	11/02/2021
Sample Time	.
Date Received	12/02/2021
SDG Ref	210212-101
Lab Sample No.(s)	23716459
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	108
Toluene-d8**	%	TM116	96.5
4-Bromofluorobenzene**	%	TM116	93.8
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<200 M
Benzene	<9 µg/kg	TM116	<180 M
Toluene	<7 µg/kg	TM116	<140 M
Ethylbenzene	<4 µg/kg	TM116	<80 M
p/m-Xylene	<10 µg/kg	TM116	<200 #
o-Xylene	<10 µg/kg	TM116	<200 M
Naphthalene	<13 µg/kg	TM116	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.4
Sum of BTEX	<40 µg/kg	TM116	<800

CERTIFICATE OF ANALYSIS

SDG:	210212-101	**Client Reference:**	P18-669	**Report Number:**	587965
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLA-2 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716430 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLA-4 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716443 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLP-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716403 TM048	18/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLP-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716417 TM048	18/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716468 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716480 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-5 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716489 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W213-7 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716392 TM048	18/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 210212-101 **Client Reference:** P18-669 **Report Number:** 587965
Location: Llanwern **Order Number:** 108282 **Superseded Report:**

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W300-1 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716382 TM048	22/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W300-3 0.20 - 0.20 SOLID 11/02/2021 00:00:00 12/02/2021 05:00:00 210212-101 23716453 TM048	18/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG: 210212-101 Client Reference: P18-669 Report Number: 587965
Location: Llanwern Order Number: 108282 Superseded Report:

Test Completion Dates

Lab Sample No(s)	23716424	23716430	23716436	23716443	23716403	23716409	23716417	23716468	23716473	23716480
Customer Sample Ref.	SPLA-1	SPLA-2	SPLA-3	SPLA-4	SPLP-1	SPLP-2	SPLP-3	W213-1	W213-2	W213-3
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Asbestos ID in Solid Samples		23-Feb-2021		23-Feb-2021	18-Feb-2021		18-Feb-2021	22-Feb-2021		23-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	18-Feb-2021	16-Feb-2021	18-Feb-2021	17-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	17-Feb-2021
EPH CWG GC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
GRO by GC-FID (S)	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Metals in solid samples by OES	20-Feb-2021	20-Feb-2021	20-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	20-Feb-2021	20-Feb-2021
PAH by GCMS	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
pH	16-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021	17-Feb-2021	16-Feb-2021	16-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021
Phenols by HPLC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Sample description	13-Feb-2021	14-Feb-2021	14-Feb-2021	14-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021	14-Feb-2021
Total Organic Carbon	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
TPH CWG GC (S)	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
VOC MS (S)	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021

Lab Sample No(s)	23716485	23716489	23716387	23716392	23716399	23716382	23716449	23716453	23716459
Customer Sample Ref.	W213-4	W213-5	W213-6	W213-7	W213-8	W300-1	W300-2	W300-3	W300-4
AGS Ref.									
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021
Asbestos ID in Solid Samples		22-Feb-2021		18-Feb-2021		22-Feb-2021		18-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	16-Feb-2021	18-Feb-2021	16-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	16-Feb-2021
EPH CWG GC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
GRO by GC-FID (S)	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Metals in solid samples by OES	20-Feb-2021	20-Feb-2021	20-Feb-2021	22-Feb-2021	20-Feb-2021	19-Feb-2021	20-Feb-2021	22-Feb-2021	22-Feb-2021
PAH by GCMS	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	22-Feb-2021	18-Feb-2021	22-Feb-2021	18-Feb-2021	19-Feb-2021
pH	16-Feb-2021	17-Feb-2021	15-Feb-2021	17-Feb-2021	16-Feb-2021	17-Feb-2021	15-Feb-2021	17-Feb-2021	16-Feb-2021
Phenols by HPLC (S)	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021	18-Feb-2021	17-Feb-2021
Sample description	13-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	14-Feb-2021	14-Feb-2021	13-Feb-2021	13-Feb-2021	13-Feb-2021
Total Organic Carbon	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
TPH CWG GC (S)	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
VOC MS (S)	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as “mixed hydrocarbons”. Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as “Not detected”. If no asbestos fibre types are found all will be reported as “Not detected” and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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

Final Report

Report No.:	21-41336-1
Initial Date of Issue:	01-Dec-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll Elliot Thomas
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	31
Turnaround (Wkdays):	5
Date Approved:	01-Dec-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	24-Nov-2021
Date Instructed:	24-Nov-2021
Results Due:	30-Nov-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703	1326704
				Client Sample ID.:	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1	AT31-2
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5	1.8
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001										
Total Asbestos	U	2192	%	0.001										
Moisture	N	2030	%	0.020	9.4	13	17	10	8.4	7.7	24	16	9.6	8.2
Soil Colour	N	2040		N/A	Black	Black	Black	Brown	Brown	Brown	Black	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.4	10.3	10.7	10.3	10.5	11.8	11.5	10.2	10.3	10.2
Cyanide (Total)	M	2300	mg/kg	0.50	2.7	1.6	20	22	1.7	1.9	< 0.50	< 0.50	0.50	1.3
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	11	7.8	6.0	14	6.9	4.4	4.2	16	1.9	1.4
Iron (Total)	N	2430	mg/kg	100	24000	26000	26000	25000	26000	23000	20000	25000	26000	22000
Arsenic	M	2450	mg/kg	1.0	43	35	19	17	14	22	3.0	14	18	23
Cadmium	M	2450	mg/kg	0.10	0.69	0.40	0.36	1.3	0.25	0.84	< 0.10	0.79	0.33	0.24
Chromium	M	2450	mg/kg	1.0	110	110	130	79	74	590	44	63	49	82
Manganese	M	2450	mg/kg	5.0	12000	11000	6400	5400	5100	26000	1400	2500	4600	6100
Copper	M	2450	mg/kg	0.50	95	95	67	36	130	71	120	180	26	31
Mercury	M	2450	mg/kg	0.10	0.66	0.85	0.89	0.27	0.24	2.7	0.24	0.19	0.26	0.21
Nickel	M	2450	mg/kg	0.50	46	47	34	37	46	58	11	36	51	17
Lead	M	2450	mg/kg	0.50	140	140	310	150	61	52	20	72	87	140
Selenium	M	2450	mg/kg	0.20	< 0.20	0.28	0.33	0.39	< 0.20	< 0.20	0.63	0.54	0.23	< 0.20
Vanadium	U	2450	mg/kg	5.0	140	120	100	110	120	1400	94	100	46	82
Zinc	M	2450	mg/kg	0.50	200	160	160	300	150	91	27	140	150	180
Organic Matter	M	2625	%	0.40	24	59	64	17	98	2.8	100	47	40	21
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	21	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	36	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	88	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326695	1326696	1326697	1326698	1326699	1326700	1326701	1326702	1326703	1326704
					Client Sample ID.:	AU31-1	AU30-1	AU30-2	AT30-1	AT30-2	AS30-1	AS30-2	AS30-3	AT31-1	AT31-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.4	0.5	1.1	0.2	1.5	0.7	1.5	2.5	0.5	1.8
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	150	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	1.8	3.2	< 0.10	< 0.10	0.67	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	0.66	0.67	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.24	0.28	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	0.32	0.52	< 0.10	< 0.10	0.47	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		0.71	2.5	4.1	3.8	1.1	< 0.10	5.7	1.4	0.84	0.48
Anthracene	M	2800	mg/kg	0.10		0.22	1.0	0.91	1.1	0.19	< 0.10	0.88	0.22	0.32	0.14
Fluoranthene	M	2800	mg/kg	0.10		1.1	4.1	6.4	6.6	2.0	0.98	3.1	1.2	1.9	0.68
Pyrene	M	2800	mg/kg	0.10		1.0	3.2	4.5	4.5	1.3	0.94	1.9	0.82	1.4	0.51
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.74	2.2	3.2	3.2	1.3	0.85	1.7	0.77	1.4	0.48
Chrysene	M	2800	mg/kg	0.10		0.70	2.5	3.4	2.8	1.3	1.0	2.0	0.90	1.6	0.65
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.7	4.1	5.2	4.8	1.3	1.7	1.9	1.1	3.1	1.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.49	1.1	1.4	1.4	0.73	0.77	0.60	0.38	0.87	0.27
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.85	2.8	2.8	3.1	1.2	1.4	1.0	0.72	2.1	0.81
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.72	2.9	2.8	2.4	1.0	1.0	< 0.10	< 0.10	2.1	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.22	0.43	1.1	0.83	0.24	< 0.10	< 0.10	< 0.10	0.48	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.91	1.9	2.5	2.3	0.84	0.78	< 0.10	< 0.10	1.6	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		9.4	29	41	42	13	9.4	20	7.5	18	5.0
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326705	1326706	1326707	1326708	1326709	1326710	1326711	1326712	1326713	1326714
				Client Sample ID.:	AS31-1	AS31-2	AR31-1	AR30-1	AQ31-1	AP31-1	AQ30-1	AQ30-2	AQ30-3	AO30-1
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.6	1.7	0.3	0.5	1.0	0.3	0.5	1.7	2.8	0.6
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		Fibres/Clumps		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Chrysotile		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001							<0.001			
Total Asbestos	U	2192	%	0.001							<0.001			
Moisture	N	2030	%	0.020	10	9.7	5.0	11	4.3	11	12	17	20	10
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Black	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	11.8	11.2	10.9	10.7	> 12.0	10.2	11.6	11.2	11.2	12.0
Cyanide (Total)	M	2300	mg/kg	0.50	2.4	3.4	< 0.50	< 0.50	< 0.50	< 0.50	4.5	2.4	< 0.50	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	0.74	0.75	< 0.50	0.56	< 0.50	< 0.50	0.61	1.5	< 0.50
Iron (Total)	N	2430	mg/kg	100	22000	23000	8900	7500	21000	19000	23000	23000	14000	23000
Arsenic	M	2450	mg/kg	1.0	26	22	55	15	43	19	25	22	12	17
Cadmium	M	2450	mg/kg	0.10	0.15	0.38	0.82	< 0.10	< 0.10	< 0.10	0.59	1.1	2.5	0.15
Chromium	M	2450	mg/kg	1.0	670	120	10	19	1200	67	410	570	86	340
Manganese	M	2450	mg/kg	5.0	28000	7300	1800	3100	35000	4300	18000	11000	2300	13000
Copper	M	2450	mg/kg	0.50	130	51	76	23	290	60	51	73	34	50
Mercury	M	2450	mg/kg	0.10	4.3	0.53	< 0.10	< 0.10	1.9	0.14	1.4	0.85	0.24	0.89
Nickel	M	2450	mg/kg	0.50	35	25	10	8.3	26	9.9	32	150	15	16
Lead	M	2450	mg/kg	0.50	43	65	21	7.5	80	23	78	110	160	38
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	1200	220	24	23	800	95	390	250	82	300
Zinc	M	2450	mg/kg	0.50	77	83	60	24	82	45	110	120	190	86
Organic Matter	M	2625	%	0.40	9.0	11	2.2	0.69	2.8	1.2	9.0	29	59	33
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	1200	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	210	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	230	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	1400	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	230	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	210	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326705	1326706	1326707	1326708	1326709	1326710	1326711	1326712	1326713	1326714
					Client Sample ID.:	AS31-1	AS31-2	AR31-1	AR30-1	AQ31-1	AP31-1	AQ30-1	AQ30-2	AQ30-3	AO30-1
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.6	1.7	0.3	0.5	1.0	0.3	0.5	1.7	2.8	0.6
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		19	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	210	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		1400	< 10	< 10	< 10	< 10	< 10	440	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		< 0.10	3.1	< 0.10	1.6	0.24	0.34	< 0.10	1.6	1.4	1.9
Anthracene	M	2800	mg/kg	0.10		< 0.10	0.83	< 0.10	0.93	0.20	0.12	< 0.10	0.27	0.41	0.39
Fluoranthene	M	2800	mg/kg	0.10		0.77	6.1	< 0.10	3.2	0.47	0.90	1.3	2.2	1.8	2.2
Pyrene	M	2800	mg/kg	0.10		0.75	4.6	< 0.10	2.4	0.21	1.2	1.5	1.7	1.6	1.6
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.70	2.5	< 0.10	1.1	0.23	0.91	0.97	1.1	1.1	0.84
Chrysene	M	2800	mg/kg	0.10		0.68	1.7	< 0.10	1.0	0.40	1.0	1.1	1.3	0.99	1.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.2	1.9	< 0.10	1.1	0.24	2.4	2.2	1.8	1.4	1.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.49	0.50	< 0.10	0.37	0.17	0.61	0.66	0.58	0.47	0.58
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.0	1.3	< 0.10	0.97	0.27	1.3	1.3	1.2	0.82	0.98
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.37	1.4	< 0.10	1.1	0.43	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.42	0.34	< 0.10	0.30	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	0.38	1.2	< 0.10	0.99	0.58	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0		5.6	23	< 2.0	13	3.6	12	9.0	14	11	11
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental				**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056				**Chemtest Sample ID.:**	1326715	1326716	1326717	1326718	1326719	1326720	1326721	1326722	1326723	1326724
				Client Sample ID.:	AN31-1	AN30-1	AM31-1	AM30-1	AM29-1	AL28-1	AT26-1	AT26-2	W208-3-1	W208-3-2
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.3	1.0	1.1	0.4	1.2	0.2	1.0	1.4	0.2	0.2
				Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
				Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	U	2192		N/A	-		-		-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Asbestos by Gravimetry	U	2192	%	0.001										
Total Asbestos	U	2192	%	0.001										
Moisture	N	2030	%	0.020	9.0	8.7	8.9	3.6	12	4.1	11	9.4	11	8.0
Soil Colour	N	2040		N/A	Black	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	11.1	11.9	> 12.0	> 12.0	> 12.0	> 12.0	11.0	11.0	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	3.6	0.50	0.70	3.9	1.5	0.90	1.1	< 0.50	0.80	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.70	< 0.50	< 0.50	1.0	< 0.50	< 0.50	< 0.50	1.2	1.1	27
Iron (Total)	N	2430	mg/kg	100	23000	22000	21000	21000	22000	21000	22000	22000	20000	21000
Arsenic	M	2450	mg/kg	1.0	27	11	17	41	23	35	33	30	38	30
Cadmium	M	2450	mg/kg	0.10	0.34	0.29	< 0.10	0.40	< 0.10	< 0.10	0.10	0.74	0.66	0.55
Chromium	M	2450	mg/kg	1.0	410	26	200	1000	450	530	400	140	130	100
Manganese	M	2450	mg/kg	5.0	17000	2700	11000	39000	18000	33000	28000	5200	4600	6600
Copper	M	2450	mg/kg	0.50	39	55	18	81	61	34	94	140	230	140
Mercury	M	2450	mg/kg	0.10	1.3	0.18	0.50	2.7	1.2	1.2	0.93	0.41	0.43	0.40
Nickel	M	2450	mg/kg	0.50	21	11	10	28	17	46	51	34	34	28
Lead	M	2450	mg/kg	0.50	67	61	24	180	43	24	31	120	120	97
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	360	38	210	780	400	2200	2300	180	190	160
Zinc	M	2450	mg/kg	0.50	130	80	53	110	60	65	69	220	200	180
Organic Matter	M	2625	%	0.40	26	53	2.4	2.1	22	1.4	2.2	7.1	5.9	6.2
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	6.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	6.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.4	< 1.0	12
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	56	< 1.0	300
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336	21-41336
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1326715	1326716	1326717	1326718	1326719	1326720	1326721	1326722	1326723	1326724
					Client Sample ID.:	AN31-1	AN30-1	AM31-1	AM30-1	AM29-1	AL28-1	AT26-1	AT26-2	W208-3-1	W208-3-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.3	1.0	1.1	0.4	1.2	0.2	1.0	1.4	0.2	0.2
					Date Sampled:	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########	19-Nov-2021	##########
					Asbestos Lab:	COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**											
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	63	< 5.0	310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	< 10	< 10	< 10	< 10	63	< 10	310
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.59	2.1	2.6
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	0.25	0.71	0.98
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	0.14	0.13	0.17
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	0.24	0.41	0.55
Phenanthrene	M	2800	mg/kg	0.10		0.59	1.2	< 0.10	0.38	< 0.10	2.0	3.7	1.2	3.3	4.1
Anthracene	M	2800	mg/kg	0.10		0.24	0.16	< 0.10	0.26	< 0.10	0.37	0.54	0.36	0.77	1.4
Fluoranthene	M	2800	mg/kg	0.10		1.5	0.76	0.84	0.74	0.83	2.7	5.7	2.3	5.4	6.9
Pyrene	M	2800	mg/kg	0.10		1.3	0.61	0.89	0.58	0.70	2.2	5.2	1.6	3.7	4.5
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.71	0.47	0.69	0.42	0.38	1.9	4.0	1.5	2.6	3.0
Chrysene	M	2800	mg/kg	0.10		0.99	0.55	0.77	0.55	0.52	2.1	3.5	1.6	2.6	3.2
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		1.5	0.55	1.1	0.48	1.0	3.1	5.8	2.5	3.3	4.2
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.26	0.26	0.50	0.18	0.31	1.3	2.1	0.61	1.5	1.5
Benzo[a]pyrene	M	2800	mg/kg	0.10		0.95	0.44	0.93	0.13	0.70	2.3	4.6	1.4	2.0	3.0
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		0.75	< 0.10	< 0.10	< 0.10	< 0.10	2.2	4.1	1.3	2.4	2.9
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.28	< 0.10	< 0.10	< 0.10	< 0.10	0.42	0.64	0.43	0.41	0.59
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.73	< 0.10	< 0.10	< 0.10	< 0.10	2.0	3.7	1.3	1.6	1.9
Total Of 16 PAH's	N	2800	mg/kg	2.0		9.8	5.0	5.7	3.7	4.4	23	44	17	33	42
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.4
Electrical Conductivity	U	1020	µS/cm	1.0	970
Suspended Solids At 105C	U	1030	mg/l	5.0	< 5.0
Total Dissolved Solids	N	1020	mg/l	1.0	630
Turbidity	N	1060	NTU	1.0	4.4
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	[B] 30
Dissolved Oxygen	N	1150	mg O2/l	0.50	6.0
Redox Potential	N	1170	mV	N/A	130
Chloride	U	1220	mg/l	1.0	55
Fluoride	U	1220	mg/l	0.050	0.56
Ammoniacal Nitrogen	U	1220	mg/l	0.050	7.8
Phosphorus (Total)	N	1220	mg/l	0.020	0.037
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.036
Sulphur	N	1220	mg/l	1.0	83
Sulphate	U	1220	mg/l	1.0	250
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050
Calcium	U	1455	mg/l	2.00	71
Magnesium	U	1455	mg/l	0.20	16
Total Calcium	N	1455	mg/l	5.0	71
Total Magnesium	N	1455	mg/l	0.50	15
Total Hardness as CaCO3	U	1270	mg/l	15	240
Arsenic (Dissolved)	U	1455	µg/l	0.20	4.4
Boron (Dissolved)	U	1455	µg/l	10.0	390
Barium (Dissolved)	U	1455	µg/l	5.00	130
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	0.67
Copper (Dissolved)	U	1455	µg/l	0.50	2.3
Iron (Dissolved)	N	1455	µg/l	5.0	28
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	100
Nickel (Dissolved)	U	1455	µg/l	0.50	2.1
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.55
Selenium (Dissolved)	U	1455	µg/l	0.50	1.7
Vanadium (Dissolved)	U	1455	µg/l	0.50	14
Zinc (Dissolved)	U	1455	µg/l	2.5	3.4
Arsenic (Total)	N	1455	µg/l	0.20	4.4

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Boron (Total)	N	1455	µg/l	10.0	390
Barium (Total)	N	1455	µg/l	5.00	130
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	0.67
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	28
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	100
Nickel (Total)	N	1455	µg/l	0.50	2.1
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	0.55
Selenium (Total)	N	1455	µg/l	0.50	1.7
Vanadium (Total)	N	1455	µg/l	0.50	14
Zinc (Total)	N	1455	µg/l	2.5	3.4
Chromium (Hexavalent)	U	1490	µg/l	20	[B] < 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	8.0
Total Inorganic Carbon	N	1220	mg/l	2.5	46
Total Organic Carbon	U	1610	mg/l	2.0	8.5
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-41336
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1326725
			Client Sample ID.:		D2-S
			Sample Type:		WATER
			Date Sampled:		##########
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1326725		D2-S		19-Nov-2021	B	Coloured Winchester 1000ml
1326725		D2-S		19-Nov-2021	B	EPA Vial 40ml
1326725		D2-S		19-Nov-2021	B	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1030	Total Suspended Solids	Total suspended solids	Filtration of a mixed sample through a standard glass fibre filter and determination of the mass of residue retained dried at 105°C.
1060	Turbidity	Turbidity	Spetctrophotometry
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1150	Dissolved Oxygen	Dissolved Oxygen (DO)	Electrometric determination (on site preferred), using oxygen sensitive membrane electrode.
1170	Redox Potential	Redox Potential	Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930

Test Methods

SOP	Title	Parameters included	Method summary
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-14900-1
Initial Date of Issue:	26-Apr-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	21
Turnaround (Wkdays):	3
Date Approved:	26-Apr-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	22-Apr-2022
Date Instructed:	22-Apr-2022
Results Due:	26-Apr-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348	1415349
Order No.: PO115623		Client Sample Ref.:			AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2	AQ27-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5	0.4
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-			-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected			No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	5.6	13	9.0	16	3.9	12	8.4	15	10
Soil Colour	N	2040		N/A	Brown	Brown	Black	Black	Brown	Black	Brown	Black	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.4	10.5	11.0	10.3	10.4	9.9	11.4	10.9	11.0
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	3.0	< 0.50	0.60	< 0.50	1.2	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.6	0.93	0.72	1.2	4.9	4.3	1.3	2.1	8.6
Iron (Total)	N	2430	mg/kg	100	34000	35000	32000	41000	26000	37000	28000	25000	12000
Arsenic	M	2455	mg/kg	1.0	5.7	4.2	4.3	11	5.8	8.3	4.6	4.9	4.6
Cadmium	M	2455	mg/kg	0.10	0.70	0.20	0.20	0.25	0.22	0.46	0.24	0.17	< 0.10
Chromium	M	2455	mg/kg	1.0	78	52	240	43	43	21	190	25	12
Manganese	M	2455	mg/kg	5.0	6500	5500	12000	3300	4400	2900	11000	2000	2400
Copper	M	2455	mg/kg	0.50	29	55	20	19	9.0	15	21	14	13
Mercury	M	2455	mg/kg	0.10	0.22	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	24	41	16	16	9.4	10	13	9.4	4.3
Lead	M	2455	mg/kg	0.50	37	26	19	71	21	63	22	40	14
Selenium	M	2455	mg/kg	0.20	2.7	2.6	1.8	0.94	2.3	1.5	2.5	1.9	3.4
Vanadium	U	2455	mg/kg	5.0	160	140	450	82	110	46	320	50	24
Zinc	M	2455	mg/kg	0.50	110	48	61	170	73	140	52	50	12
Organic Matter	M	2625	%	0.40	1.9	1.7	6.4	100	14	28	8.5	66	6.0
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	11	< 1.0	< 1.0	17
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	17
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	120	540	< 1.0	46
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	12	< 5.0	< 5.0	< 5.0	150	540	< 5.0	79
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1415341	1415342	1415343	1415344	1415345	1415346	1415347	1415348	1415349
Order No.: PO115623			Client Sample Ref.:		AR29-1	AR29-2	AR28-1	AR28-2	AS28-1	AS28-2	AS29-1	AS29-2	AQ27-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.9	2.0	0.5	2.0	0.5	1.5	0.6	2.5	0.4
			Date Sampled:		20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
			Asbestos Lab:		NEW-ASB			NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	350	< 1.0	170	< 1.0	210	160	< 1.0	29
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.7
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	350	< 5.0	170	< 5.0	210	160	< 5.0	35
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	360	< 10	170	< 10	360	690	< 10	110
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0	1.8	2.5	3.7	3.4
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	2.0	< 1.0	2.0	1.6	2.8	2.3
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	2.1	< 0.10	1.5	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.44	< 0.10	0.20	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.78	< 0.10	0.25	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.24	0.12	0.47	4.5	0.90	1.0	1.1	1.3	0.23
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	1.0	0.18	0.18	0.20	0.25	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.50	0.25	1.3	5.4	0.99	0.88	2.5	0.85	0.20
Pyrene	M	2800	mg/kg	0.10	0.60	0.22	1.4	4.0	0.80	0.78	2.4	0.79	0.21
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.33	0.14	0.64	4.3	0.42	0.37	1.9	0.50	< 0.10
Chrysene	M	2800	mg/kg	0.10	0.38	0.14	0.88	3.8	0.40	0.41	2.4	0.49	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.68	0.29	1.4	7.3	0.83	0.60	3.9	0.74	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.18	0.12	0.51	2.4	0.22	0.20	1.4	0.15	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.57	0.26	0.89	5.6	0.66	0.38	2.8	0.50	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.41	< 0.10	0.76	3.4	0.57	0.30	2.0	0.27	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	0.14	1.2	0.14	0.11	0.38	0.11	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.40	< 0.10	0.73	3.2	0.63	0.41	1.9	0.34	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.3	< 2.0	9.1	50	6.7	7.7	23	6.3	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415350	1415351	1415352	1415353	1415354	1415355	1415356	1415357	1415358
Order No.: PO115623		Client Sample Ref.:			AP27-1	AR26-1	AR25-1	AR26-2	AR24-1	AR24-2	AQ22-1	AQ22-2	AP22-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.4	0.5	0.4	1.5	0.3	1.6	0.3	1.7	0.5
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	6.1	6.9	4.8	12	4.1	12	6.4	13	10
Soil Colour	N	2040		N/A	Black	Brown	Brown	Black	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel	Gravel	Gravel	Gravel	Loam	Gravel	Gravel	Gravel
pH	M	2010		4.0	10.8	11.6	11.2	10.9	> 12.0	10.2	10.7	10.9	10.4
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	0.90	< 0.50	0.60	< 0.50	0.60	< 0.50	1.8	1.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	2.7	2.2	5.8	1.7	1.1	38	6.9	6.2	10
Iron (Total)	N	2430	mg/kg	100	11000	34000	38000	13000	35000	13000	16000	13000	15000
Arsenic	M	2455	mg/kg	1.0	3.6	3.3	7.9	4.0	4.6	3.5	4.7	3.7	5.4
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.11	< 0.10	< 0.10	0.37	< 0.10	0.22	0.10	0.41
Chromium	M	2455	mg/kg	1.0	48	140	27	59	380	9.7	12	74	16
Manganese	M	2455	mg/kg	5.0	3500	9200	2000	4800	23000	640	1600	2800	1300
Copper	M	2455	mg/kg	0.50	45	13	13	7.7	44	14	11	7.4	15
Mercury	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	5.5	11	21	5.3	14	7.1	5.6	9.2	15
Lead	M	2455	mg/kg	0.50	18	16	32	12	42	16	18	12	54
Selenium	M	2455	mg/kg	0.20	4.2	< 0.20	< 0.20	6.8	12	0.48	1.2	3.7	2.5
Vanadium	U	2455	mg/kg	5.0	85	520	140	88	370	16	26	120	35
Zinc	M	2455	mg/kg	0.50	29	39	66	22	110	49	51	25	49
Organic Matter	M	2625	%	0.40	13	2.1	0.81	7.6	6.2	62	8.1	2.9	6.6
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	8.0	< 1.0	16	19	13	14	48	7.8	14
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	56	< 1.0	23	38	22	20	110	21	20
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	50	< 1.0	54	35	24	26	100	22	37
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	52	70	350	140	100	70	330	39	69
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	170	70	440	230	160	130	590	90	140
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	2.6	9.6	3.6	4.1	5.5	< 1.0	2.6
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	4.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900	22-14900
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1415350	1415351	1415352	1415353	1415354	1415355	1415356	1415357	1415358
Order No.: PO115623			Client Sample Ref.:		AP27-1	AR26-1	AR25-1	AR26-2	AR24-1	AR24-2	AQ22-1	AQ22-2	AP22-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.4	0.5	0.4	1.5	0.3	1.6	0.3	1.7	0.5
			Date Sampled:		20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022	20-Apr-2022
			Asbestos Lab:		NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	32	40	52	58	37	36	170	35	31
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	6.4	< 1.0	5.9	7.2	< 1.0	5.0	17	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	38	40	61	80	40	45	190	35	34
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	200	110	510	310	200	170	780	120	170
Benzene	M	2760	µg/kg	1.0	7.6	< 1.0	< 1.0	8.9	< 1.0	63	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	2.9	< 1.0	< 1.0	2.3	< 1.0	17	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.73	< 0.10	2.1	< 0.10	< 0.10	0.54	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.14	< 0.10	0.11	< 0.10	< 0.10	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.27	< 0.10	0.23	< 0.10	< 0.10	0.43	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.16	< 0.10	0.30	< 0.10	< 0.10	0.26	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.44	2.2	0.35	1.6	0.70	1.8	0.91	0.33	0.50
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.40	< 0.10	0.35	< 0.10	0.10	0.16	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.29	4.2	0.55	1.4	1.3	0.21	0.63	0.15	0.41
Pyrene	M	2800	mg/kg	0.10	0.20	3.5	0.40	1.0	1.2	0.26	0.51	0.13	0.30
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.11	2.4	0.13	0.64	0.64	< 0.10	0.16	< 0.10	0.21
Chrysene	M	2800	mg/kg	0.10	0.17	2.9	0.17	0.70	0.71	0.57	0.27	< 0.10	0.22
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	4.2	< 0.10	0.57	1.3	< 0.10	0.36	< 0.10	0.23
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10	0.15	1.2	< 0.10	0.14	< 0.10	0.11
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	3.4	< 0.10	0.47	0.91	< 0.10	0.22	< 0.10	0.16
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	2.4	< 0.10	0.28	0.71	< 0.10	0.17	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.46	< 0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	2.2	< 0.10	0.38	0.79	< 0.10	0.19	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	31	< 2.0	10	9.5	2.9	5.1	< 2.0	2.1
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.32	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	0.18	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.57	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-14900	22-14900	22-14900
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1415359	1415360	1415361
Order No.: PO115623		Client Sample Ref.:			AP22-2	AR22-1	AR22-2
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			1.5	0.9	1.8
		Date Sampled:			20-Apr-2022	20-Apr-2022	20-Apr-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A	-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	14	7.2	5.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Loam	Loam	Gravel
pH	M	2010		4.0	10.4	9.8	10.8
Cyanide (Total)	M	2300	mg/kg	0.50	1.3	0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.3	6.9	3.7
Iron (Total)	N	2430	mg/kg	100	14000	19000	12000
Arsenic	M	2455	mg/kg	1.0	4.8	6.1	1.8
Cadmium	M	2455	mg/kg	0.10	0.73	0.62	0.12
Chromium	M	2455	mg/kg	1.0	20	50	45
Manganese	M	2455	mg/kg	5.0	2100	8900	3000
Copper	M	2455	mg/kg	0.50	15	12	4.9
Mercury	M	2455	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2455	mg/kg	0.50	14	12	5.8
Lead	M	2455	mg/kg	0.50	110	38	7.1
Selenium	M	2455	mg/kg	0.20	4.6	1.7	0.32
Vanadium	U	2455	mg/kg	5.0	43	75	130
Zinc	M	2455	mg/kg	0.50	60	130	24
Organic Matter	M	2625	%	0.40	2.4	2.8	1.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	20	12	12
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	19	34	21
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	25	31	21
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	53	99	72
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	120	180	130
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	4.0	7.5
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	45

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-14900	22-14900	22-14900
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1415359	1415360	1415361
Order No.: PO115623			Client Sample Ref.:		AP22-2	AR22-1	AR22-2
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		1.5	0.9	1.8
			Date Sampled:		20-Apr-2022	20-Apr-2022	20-Apr-2022
			Asbestos Lab:		NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	30	33	250
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	4.9	6.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	35	43	310
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	150	220	430
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.72	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	0.14	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.73	0.23	0.23
Pyrene	M	2800	mg/kg	0.10	0.61	0.22	0.24
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.42	< 0.10	0.14
Chrysene	M	2800	mg/kg	0.10	0.34	< 0.10	0.16
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.51	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.17	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.37	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.0	< 2.0	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-16145-1
Initial Date of Issue:	06-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	12
Turnaround (Wkdays):	1
Date Approved:	06-May-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	03-May-2022
Date Instructed:	06-May-2022
Results Due:	06-May-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1420835	1420836	1420837	1420838	1420839	1420840	1420841	1420842	1420843
		Client Sample ID.:			AN29-1	AN29-2	AM30-1	AN30-1	AN30-2	AO30-1	A030-2	AM29-1	AM29-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
		Bottom Depth (m):			0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:				NEW-ASB		NEW-ASB			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-			-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected			No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	11	6.6	9.6	9.6	11	13	16	8.7	14
Soil Colour	N	2040		N/A	Brown	Brown	Black	Brown	Brown	Brown	Black	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.3	9.2	10.1	9.9	9.4	9.4	11.1	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	1.4	1.4	< 0.50	< 0.50	0.60	< 0.50	< 0.50	1.4	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.70	0.58	1.0	< 0.50	< 0.50	100	3.1	< 0.50	< 0.50
Iron (Total)	N	2430	mg/kg	100	26000	27000	12000	20000	26000	23000	15000	38000	31000
Arsenic	M	2455	mg/kg	0.5	4.9	3.9	3.0	2.8	8.4	6.9	3.7	4.2	3.4
Cadmium	M	2455	mg/kg	0.10	0.89	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10
Chromium	M	2455	mg/kg	0.5	94	140	5.5	19	24	33	9.0	340	120
Manganese	M	2455	mg/kg	1.0	< 1.0	< 1.0	370	3700	2500	320	650	17000	6200
Copper	M	2455	mg/kg	0.50	16	15	14	12	27	19	16	23	21
Mercury	M	2455	mg/kg	0.05	0.07	0.11	0.06	< 0.05	< 0.05	< 0.05	0.11	0.29	0.12
Nickel	M	2455	mg/kg	0.50	9.1	8.9	5.4	4.9	15	41	6.4	11	10
Lead	M	2455	mg/kg	0.50	140	63	21	12	58	15	66	55	39
Selenium	M	2455	mg/kg	0.25	0.35	1.5	0.58	3.1	2.9	1.8	1.3	1.3	0.60
Vanadium	U	2455	mg/kg	0.5	120	130	8.7	31	20	51	17	380	140
Zinc	M	2455	mg/kg	0.50	690	170	25	39	63	68	37	150	95
Organic Matter	M	2625	%	0.40	21	11	100	6.4	38	< 0.40	100	22	100
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	14	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	78	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	89	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	91	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	270	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					Chemtest Job No.:	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145	22-16145
Quotation No.: Q21-24056					Chemtest Sample ID.:	1420835	1420836	1420837	1420838	1420839	1420840	1420841	1420842	1420843
					Client Sample ID.:	AN29-1	AN29-2	AM30-1	AN30-1	AN30-2	AO30-1	A030-2	AM29-1	AM29-2
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
					Bottom Depth (m):	0.3	1.0	0.8	0.4	1.0	0.3	1.5	0.5	1.5
					Date Sampled:	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022	28-Apr-2022
					Asbestos Lab:		NEW-ASB		NEW-ASB			NEW-ASB		NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	29	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	130	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	150	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	430	< 10	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		0.20	1.2	0.49	1.1	0.12	0.59	0.31	1.9	0.20
Anthracene	M	2800	mg/kg	0.10		< 0.10	0.20	0.15	0.24	< 0.10	0.13	< 0.10	0.35	< 0.10
Fluoranthene	M	2800	mg/kg	0.10		0.16	3.0	0.93	1.7	0.25	1.0	0.47	2.8	1.0
Pyrene	M	2800	mg/kg	0.10		0.15	2.7	0.77	1.5	0.21	0.92	0.43	2.3	1.0
Benzo[a]anthracene	M	2800	mg/kg	0.10		0.12	2.1	0.35	0.70	0.11	0.44	0.20	1.2	0.72
Chrysene	M	2800	mg/kg	0.10		0.15	2.9	0.27	0.76	0.11	0.49	0.21	1.4	0.73
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		< 0.10	3.7	0.54	0.91	0.18	0.61	0.27	1.5	1.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		< 0.10	1.3	0.18	0.32	< 0.10	0.21	< 0.10	0.57	0.40
Benzo[a]pyrene	M	2800	mg/kg	0.10		< 0.10	2.6	0.42	0.75	0.13	0.54	0.24	1.3	0.91
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		< 0.10	1.6	< 0.10	0.47	< 0.10	< 0.10	< 0.10	0.80	0.85
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		< 0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.26
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		< 0.10	1.9	< 0.10	0.52	< 0.10	< 0.10	< 0.10	0.81	0.92
Total Of 16 PAH's	N	2800	mg/kg	2.0		< 2.0	24	4.1	9.0	< 2.0	4.9	2.1	15	8.1
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16145	22-16145	22-16145
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1420844	1420845	1420846
		Client Sample ID.:			AP30-1	AP30-2	AP31-1
		Sample Type:			SOIL	SOIL	SOIL
		Top Depth (m):			0.7	1.7	1.5
		Bottom Depth (m):			0.7	1.7	1.5
		Date Sampled:			28-Apr-2022	28-Apr-2022	28-Apr-2022
		Asbestos Lab:				NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
ACM Type	U	2192		N/A		-	-
Asbestos Identification	U	2192		N/A		No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.6	5.3	7.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand
pH	M	2010		4.0	> 12.0	10.2	11.5
Cyanide (Total)	M	2300	mg/kg	0.50	2.7	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Iron (Total)	N	2430	mg/kg	100	41000	15000	46000
Arsenic	M	2455	mg/kg	0.5	5.6	11	8.8
Cadmium	M	2455	mg/kg	0.10	0.58	0.25	0.38
Chromium	M	2455	mg/kg	0.5	480	25	270
Manganese	M	2455	mg/kg	1.0	20000	1400	25000
Copper	M	2455	mg/kg	0.50	27	16	46
Mercury	M	2455	mg/kg	0.05	0.17	0.09	< 0.05
Nickel	M	2455	mg/kg	0.50	17	17	30
Lead	M	2455	mg/kg	0.50	40	68	84
Selenium	M	2455	mg/kg	0.25	1.4	1.3	1.3
Vanadium	U	2455	mg/kg	0.5	480	17	470
Zinc	M	2455	mg/kg	0.50	120	90	130
Organic Matter	M	2625	%	0.40	7.4	13	3.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	120	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	120	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16145	22-16145	22-16145
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1420844	1420845	1420846
			Client Sample ID.:		AP30-1	AP30-2	AP31-1
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.7	1.7	1.5
			Bottom Depth (m):		0.7	1.7	1.5
			Date Sampled:		28-Apr-2022	28-Apr-2022	28-Apr-2022
			Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	74	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	74	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	190	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.17	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.76	< 0.10
Pyrene	M	2800	mg/kg	0.10	< 0.10	0.75	< 0.10
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	0.53	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	0.49	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.75	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.29	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	0.67	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	0.43	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.11	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	0.49	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	5.4	< 2.0
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-16610-1
Initial Date of Issue:	11-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	11-May-2022
Approved By:	

Date Received:	06-May-2022
Date Instructed:	06-May-2022
Results Due:	12-May-2022



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-	-		-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.4	6.1	9.9	11	9.6	6.1	8.9	6.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Roots and Stones	Stones and Roots	Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.2	8.9	8.7	8.8	8.8	8.6	8.6	8.6
Cyanide (Total)	M	2300	mg/kg	0.50	5.7	3.8	0.70	< 0.50	0.50	< 0.50	< 0.50	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.4	5.0	9.3	4.3	4.5	7.2	7.8	66
Iron (Total)	N	2430	mg/kg	100	33000	53000	37000	39000	32000	44000	27000	28000
Arsenic	M	2455	mg/kg	0.5	6.7	14	31	7.2	4.8	7.5	12	6.0
Cadmium	M	2455	mg/kg	0.10	0.45	1.4	0.61	0.91	0.52	0.47	0.26	0.18
Chromium	M	2455	mg/kg	0.5	26	55	51	100	49	97	22	19
Manganese	M	2455	mg/kg	1.0	2300	3300	6400	4900	2400	4800	920	1000
Copper	M	2455	mg/kg	0.50	15	19	27	23	15	20	17	11
Mercury	M	2455	mg/kg	0.05	0.32	0.46	0.28	0.32	0.23	0.25	0.21	0.20
Nickel	M	2455	mg/kg	0.50	13	19	25	17	11	19	12	12
Lead	M	2455	mg/kg	0.50	52	320	57	190	72	68	26	33
Selenium	M	2455	mg/kg	0.25	2.1	2.0	1.4	1.5	1.2	1.6	1.4	1.2
Vanadium	U	2455	mg/kg	0.5	44	110	80	160	88	120	28	25
Zinc	M	2455	mg/kg	0.50	140	630	150	500	220	170	48	62
Organic Matter	M	2625	%	0.40	7.9	21	24	13	31	28	38	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	7.3	< 1.0	< 1.0	11	10	10	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	53	< 1.0	< 1.0	230	140	60	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	60	< 5.0	< 5.0	240	150	71	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	5.9	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	39	< 1.0	< 1.0	< 1.0	66	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	55	< 5.0	< 5.0	< 5.0	72	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	60	55	< 10	240	150	140	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	6.5	17	12	4.6	9.6	11	8.4	5.5
Acenaphthylene	N	2800	mg/kg	0.10	0.51	3.0	0.72	0.31	1.0	1.7	0.32	0.95
Acenaphthene	M	2800	mg/kg	0.10	0.20	0.47	0.22	0.15	0.27	0.35	0.24	0.18
Fluorene	M	2800	mg/kg	0.10	0.52	2.1	0.53	0.15	0.78	1.2	0.28	0.13
Phenanthrene	M	2800	mg/kg	0.10	3.9	14	3.3	1.2	6.5	10	1.8	0.89
Anthracene	M	2800	mg/kg	0.10	0.71	3.5	0.97	0.28	2.1	3.3	0.41	0.37
Fluoranthene	M	2800	mg/kg	0.10	4.8	25	6.6	2.4	15	24	2.4	4.3
Pyrene	M	2800	mg/kg	0.10	3.5	18	4.8	2.0	11	16	1.8	3.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.1	11	3.6	1.4	6.6	13	1.2	2.9
Chrysene	M	2800	mg/kg	0.10	2.6	10	3.2	1.4	6.6	13	0.96	2.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.1	14	5.8	2.8	9.5	19	1.9	6.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.2	4.6	2.0	0.70	3.4	6.3	0.63	1.9
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.3	12	4.4	2.1	7.8	14	1.2	5.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.1	8.7	3.9	2.2	6.6	13	1.4	5.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.34	1.1	0.50	0.27	0.88	2.2	0.24	0.79
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.7	5.9	2.9	1.4	4.6	8.3	0.97	4.0
Total Of 16 PAH's	N	2800	mg/kg	2.0	36	150	55	23	92	160	24	45
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020	0.24	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.3
Electrical Conductivity	U	1020	µS/cm	1.0	800
Suspended Solids At 105C	U	1030	mg/l	5.0	180
Total Dissolved Solids	N	1020	mg/l	1.0	520
Turbidity	N	1060	NTU	1.0	260
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	22
Dissolved Oxygen	N	1150	mg O2/l	0.50	3.4
Redox Potential	N	1170	mV	N/A	150
Chloride	U	1220	mg/l	1.0	66
Fluoride	U	1220	mg/l	0.050	0.54
Ammoniacal Nitrogen	U	1220	mg/l	0.050	2.6
Phosphorus (Total)	N	1220	mg/l	0.020	0.040
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.039
Sulphur	N	1220	mg/l	1.0	43
Sulphate	U	1220	mg/l	1.0	130
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	64
Magnesium	U	1455	mg/l	0.20	13
Total Calcium	N	1455	mg/l	5.0	64
Total Magnesium	N	1455	mg/l	0.50	13
Total Hardness as CaCO3	U	1270	mg/l	15	210
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.6
Boron (Dissolved)	U	1455	µg/l	10.0	130
Barium (Dissolved)	U	1455	µg/l	5.00	68
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	1.2
Copper (Dissolved)	U	1455	µg/l	0.50	1.6
Iron (Dissolved)	N	1455	µg/l	5.0	35
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	420
Nickel (Dissolved)	U	1455	µg/l	0.50	1.9
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.55

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	< 0.50
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.8
Zinc (Dissolved)	U	1455	µg/l	2.5	2.9
Arsenic (Total)	N	1455	µg/l	0.20	3.3
Boron (Total)	N	1455	µg/l	10.0	210
Barium (Total)	N	1455	µg/l	5.00	72
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	0.21
Chromium (Total)	N	1455	µg/l	0.50	1.5
Copper (Total)	N	1455	µg/l	0.50	4.2
Iron (Total)	N	1455	µg/l	5.0	590
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	440
Nickel (Total)	N	1455	µg/l	0.50	3.4
Lead (Total)	N	1455	µg/l	0.50	7.9
Antimony (Total)	N	1455	µg/l	0.50	0.77
Selenium (Total)	N	1455	µg/l	0.50	0.88
Vanadium (Total)	N	1455	µg/l	0.50	8.8
Zinc (Total)	N	1455	µg/l	2.5	40
Chromium (Hexavalent)	U	1490	µg/l	20	89
Dissolved Organic Carbon	U	1610	mg/l	2.0	8.0
Total Inorganic Carbon	N	1220	mg/l	2.5	38
Total Organic Carbon	U	1610	mg/l	2.0	8.7
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	130
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	130
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	130
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Amended Report

Report No.:	22-18735-2		
Initial Date of Issue:	25-May-2022	**Date of Re-Issue:**	15-Jun-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	20-May-2022
Order No.:	PO115623	**Date Instructed:**	20-May-2022
No. of Samples:	13		
Turnaround (Wkdays):	3	**Results Due:**	24-May-2022
Date Approved:	25-May-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1432298	1432299	1432300	1432301	1432302	1432303	1432304	1432305	1432306
		Client Sample ID.:			AO22-1	AO24-1	AO23-1	AO25-1	AP25-1	AP26-1	AO26-1	AP23-1	AP24-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	1.00	1.50	1.00	1.70	1.70	1.80	1.50	0.90
		Date Sampled:			18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	18	7.5	9.6	8.3	6.9	10	7.4	22	11
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Roots and Stones	Stones	Roots and Stones	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.9	> 12.0	8.7	> 12.0	9.4	11.8	9.2	8.5	9.4
Cyanide (Total)	M	2300	mg/kg	0.50	37	< 0.50	700	0.90	8.3	1.4	< 0.50	4.1	1.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	42	0.61	19	0.58	28	1.4	5.4	180	4.2
Iron (Total)	N	2430	mg/kg	100	99000	76000	88000	77000	100000	73000	54000	15000	67000
Arsenic	M	2455	mg/kg	0.5	6.9	2.5	6.1	2.7	7.9	4.4	4.0	4.8	3.7
Cadmium	M	2455	mg/kg	0.10	0.18	0.14	0.26	0.18	0.26	0.23	0.28	0.24	0.24
Chromium	M	2455	mg/kg	0.5	46	150	54	170	52	130	71	11	80
Manganese	M	2455	mg/kg	1.0	3300	11000	4000	13000	3000	9700	4300	230	5700
Copper	M	2455	mg/kg	0.50	13	16	16	18	16	15	10	6.7	13
Mercury	M	2455	mg/kg	0.05	0.24	0.05	0.11	0.05	0.20	0.25	0.06	< 0.05	0.15
Nickel	M	2455	mg/kg	0.50	17	11	19	16	20	12	9.6	9.4	9.9
Lead	M	2455	mg/kg	0.50	33	24	29	23	34	35	37	17	53
Selenium	M	2455	mg/kg	0.25	0.73	1.2	0.62	1.2	0.77	0.67	0.46	0.46	0.75
Vanadium	U	2455	mg/kg	0.5	120	570	140	610	110	530	190	15	340
Zinc	M	2455	mg/kg	0.50	83	42	79	44	74	120	120	39	110
Organic Matter	M	2625	%	0.40	17	2.1	19	2.1	26	5.2	21	7.1	9.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	150	250	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	150	250	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1432298	1432299	1432300	1432301	1432302	1432303	1432304	1432305	1432306
			Client Sample ID.:		AO22-1	AO24-1	AO23-1	AO25-1	AP25-1	AP26-1	AO26-1	AP23-1	AP24-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	1.00	1.50	1.00	1.70	1.70	1.80	1.50	0.90
			Date Sampled:		18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022	18-May-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	12	< 1.0	< 1.0	< 1.0	48	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	71	< 1.0	< 1.0	< 1.0	42	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	83	< 5.0	< 5.0	< 5.0	100	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	83	< 10	150	250	100	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	3.0	0.98	< 0.10	1.7	< 0.10	15	24	< 0.10	18
Acenaphthylene	N	2800	mg/kg	0.10	0.21	0.11	< 0.10	0.16	< 0.10	2.2	3.9	< 0.10	3.2
Acenaphthene	M	2800	mg/kg	0.10	0.38	0.58	< 0.10	1.1	< 0.10	0.59	0.73	< 0.10	0.96
Fluorene	M	2800	mg/kg	0.10	0.31	0.23	< 0.10	0.50	< 0.10	2.4	2.6	< 0.10	2.9
Phenanthrene	M	2800	mg/kg	0.10	1.6	6.7	2.7	9.5	0.61	24	17	< 0.10	22
Anthracene	M	2800	mg/kg	0.10	0.34	0.57	0.43	1.1	0.11	4.3	4.6	< 0.10	5.5
Fluoranthene	M	2800	mg/kg	0.10	2.1	7.2	2.7	13	0.79	34	26	0.32	36
Pyrene	M	2800	mg/kg	0.10	1.6	5.8	2.1	11	0.65	24	18	0.24	26
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.99	3.2	1.0	6.7	0.30	12	11	< 0.10	14
Chrysene	M	2800	mg/kg	0.10	0.92	4.0	1.1	8.0	0.34	12	12	< 0.10	15
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.6	5.9	1.3	12	0.58	16	15	< 0.10	20
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.51	2.2	0.38	4.7	0.21	5.4	5.2	< 0.10	6.8
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.99	4.6	1.0	11	0.34	12	10	< 0.10	15
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.88	3.7	0.68	7.8	0.35	8.9	7.6	< 0.10	11
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.15	0.62	0.12	1.4	0.10	1.8	1.5	< 0.10	2.1
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.83	3.6	0.69	7.9	0.35	8.1	6.7	< 0.10	9.7
Total Of 16 PAH's	N	2800	mg/kg	2.0	16	50	14	98	4.7	180	170	< 2.0	210
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1432307	1432308	1432309	1432310
		Client Sample ID.:			AO28-1	AN28-1	AP28-1	AQ28-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.60	1.20	0.80	1.00
		Date Sampled:			18-May-2022	18-May-2022	18-May-2022	18-May-2022
		Asbestos Lab:				DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A		-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	9.1	11	10	8.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Roots and Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.0	8.8	8.9	8.9
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	0.60	0.60	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	2.9	0.93	1.4
Iron (Total)	N	2430	mg/kg	100	26000	4500	59000	53000
Arsenic	M	2455	mg/kg	0.5	2.2	0.6	2.5	1.9
Cadmium	M	2455	mg/kg	0.10	0.14	< 0.10	0.12	< 0.10
Chromium	M	2455	mg/kg	0.5	14	5.4	88	92
Manganese	M	2455	mg/kg	1.0	2000	230	4200	3900
Copper	M	2455	mg/kg	0.50	4.6	3.1	11	8.2
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	0.06	< 0.05
Nickel	M	2455	mg/kg	0.50	3.7	1.3	6.1	5.3
Lead	M	2455	mg/kg	0.50	19	4.0	20	13
Selenium	M	2455	mg/kg	0.25	1.4	< 0.25	0.43	0.61
Vanadium	U	2455	mg/kg	0.5	31	5.4	99	82
Zinc	M	2455	mg/kg	0.50	60	13	64	43
Organic Matter	M	2625	%	0.40	28	93	33	64
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	39
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	39
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	190

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-18735	22-18735	22-18735	22-18735
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1432307	1432308	1432309	1432310
			Client Sample ID.:		AO28-1	AN28-1	AP28-1	AQ28-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.60	1.20	0.80	1.00
			Date Sampled:		18-May-2022	18-May-2022	18-May-2022	18-May-2022
			Asbestos Lab:			DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	13	3400
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	4500
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	810
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	13	8900
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	13	9000
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.4	4.9	7.3	4.0
Acenaphthylene	N	2800	mg/kg	0.10	0.13	0.29	3.2	0.34
Acenaphthene	M	2800	mg/kg	0.10	0.18	0.55	0.51	0.34
Fluorene	M	2800	mg/kg	0.10	0.20	0.67	1.7	0.35
Phenanthrene	M	2800	mg/kg	0.10	1.2	5.8	17	2.9
Anthracene	M	2800	mg/kg	0.10	0.29	0.95	5.2	0.66
Fluoranthene	M	2800	mg/kg	0.10	1.5	3.8	26	3.7
Pyrene	M	2800	mg/kg	0.10	1.3	2.9	20	3.0
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.69	1.8	9.1	2.1
Chrysene	M	2800	mg/kg	0.10	0.67	1.9	10	2.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.98	2.2	14	3.7
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.32	0.65	4.5	1.1
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.60	1.4	10	2.7
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.48	0.88	7.9	2.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.16	0.27	1.4	0.41
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.53	0.90	7.5	2.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	11	30	150	32
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-20454-1
Initial Date of Issue:	09-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson Caitlin Davies David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	23
Turnaround (Wkdays):	5
Date Approved:	09-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	01-Jun-2022
Date Instructed:	01-Jun-2022
Results Due:	09-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440189	1440190	1440191	1440192	1440193	1440194	1440195	1440196	1440197
		Client Sample ID.:			AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2	AX34-1	AX34-2	AW37-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.00	2.00	0.60	1.50	0.50	1.20	0.70	1.30	0.30
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:			DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	8.5	9.7	4.0	7.4	7.3	9.1	4.2	6.6	5.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand
pH	M	2010		4.0	9.7	8.8	9.4	10.4	9.3	10.0	10.5	9.7	11.6
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.3	23	1.9	4.4	2.0	29	0.56	20	0.67
Iron (Total)	N	2430	mg/kg	100	3500	8200	2200	4800	3900	6000	< 100	8800	17000
Arsenic	M	2455	mg/kg	0.5	2.7	1.2	2.0	< 0.5	2.3	1.5	< 0.5	1.3	1.4
Cadmium	M	2455	mg/kg	0.10	0.25	0.24	< 0.10	< 0.10	0.16	0.55	< 0.10	0.38	0.59
Chromium	M	2455	mg/kg	0.5	8.7	7.8	4.3	2.8	5.2	7.5	0.5	8.7	160
Manganese	M	2455	mg/kg	1.0	1300	840	450	530	750	1100	1700	680	6700
Copper	M	2455	mg/kg	0.50	10	6.3	6.7	1.6	6.9	5.4	0.93	4.8	9.3
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	4.7	7.2	4.1	0.88	4.4	3.6	1.2	6.9	3.2
Lead	M	2455	mg/kg	0.50	19	24	8.8	2.2	6.3	37	2.5	18	25
Selenium	M	2455	mg/kg	0.25	0.72	0.26	< 0.25	< 0.25	0.41	0.56	0.76	< 0.25	0.31
Vanadium	U	2455	mg/kg	0.5	18	9.5	8.1	6.0	11	14	< 0.5	27	110
Zinc	M	2455	mg/kg	0.50	26	23	18	3.9	13	38	4.9	24	91
Organic Matter	M	2625	%	0.40	8.1	4.1	3.6	5.0	9.0	3.3	6.7	2.1	1.7
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.1

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1440189	1440190	1440191	1440192	1440193	1440194	1440195	1440196	1440197
			Client Sample ID.:		AX37-1	AX37-2	AX36-1	AX36-2	AX35-1	AX35-2	AX34-1	AX34-2	AW37-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.00	2.00	0.60	1.50	0.50	1.20	0.70	1.30	0.30
			Date Sampled:		30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
			Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	44
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	49
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	49
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.47
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.34
Phenanthrene	M	2800	mg/kg	0.10	0.52	0.61	< 0.10	0.51	0.32	0.42	0.29	< 0.10	3.0
Anthracene	M	2800	mg/kg	0.10	0.33	0.24	< 0.10	0.15	0.12	< 0.10	< 0.10	< 0.10	1.1
Fluoranthene	M	2800	mg/kg	0.10	0.94	0.53	< 0.10	0.81	0.32	0.29	0.74	< 0.10	8.0
Pyrene	M	2800	mg/kg	0.10	0.77	0.48	< 0.10	0.63	0.28	0.25	0.67	< 0.10	7.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.61	0.45	< 0.10	0.32	< 0.10	< 0.10	0.44	< 0.10	5.4
Chrysene	M	2800	mg/kg	0.10	0.46	0.40	< 0.10	0.45	< 0.10	< 0.10	0.35	< 0.10	6.3
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.87	0.50	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10	9.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.33	0.38	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10	4.0
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.43	0.31	< 0.10	< 0.10	< 0.10	< 0.10	0.20	< 0.10	8.2
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.43	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.32	0.31	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.74
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.68	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	5.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	6.7	5.1	< 2.0	2.9	< 2.0	< 2.0	3.3	< 2.0	65
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440198	1440199	1440200	1440201	1440202	1440203	1440204	1440205	1440206
		Client Sample ID.:			AW37-2	AW36-1	AW36-2	AW35-1	AW34-1	AW34-2	AV34-1	AV34-2	AV35-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.50	0.30	1.60	0.50	1.00	2.00	0.40	1.80	1.00
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A		-		-	-		-		-
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	11	6.6	12	5.8	13	10	6.3	13	8.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Gravel	Sand	Sand	Sand
pH	M	2010		4.0	11.1	10.2	9.5	10.8	9.8	10.8	10.5	10.1	10.7
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.50	1.5	4.0	5.2
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.86	< 0.50	26	0.61	1.5	0.78	1.1	2.3	0.78
Iron (Total)	N	2430	mg/kg	100	9800	15000	13000	6500	5400	5500	7800	6200	4900
Arsenic	M	2455	mg/kg	0.5	18	2.4	6.1	2.4	2.6	1.9	3.1	2.0	1.9
Cadmium	M	2455	mg/kg	0.10	0.26	0.22	0.24	0.31	0.34	0.14	0.11	0.28	0.35
Chromium	M	2455	mg/kg	0.5	32	85	12	24	15	13	23	13	12
Manganese	M	2455	mg/kg	1.0	2200	3200	810	2400	2100	2200	3000	1900	2000
Copper	M	2455	mg/kg	0.50	12	9.9	13	7.1	12	7.1	7.7	9.9	6.4
Mercury	M	2455	mg/kg	0.05	0.07	0.07	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	7.3	2.7	8.2	3.1	5.8	3.3	4.7	5.6	3.6
Lead	M	2455	mg/kg	0.50	30	31	41	43	45	16	24	40	33
Selenium	M	2455	mg/kg	0.25	1.2	0.27	0.47	1.0	0.66	1.3	1.5	0.73	0.48
Vanadium	U	2455	mg/kg	0.5	80	67	19	29	26	20	36	23	17
Zinc	M	2455	mg/kg	0.50	59	99	62	110	90	41	54	180	76
Organic Matter	M	2625	%	0.40	8.1	5.7	7.8	3.8	15	3.3	3.3	7.9	5.0
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	72
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	72
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			Chemtest Job No.:		22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056			Chemtest Sample ID.:		1440198	1440199	1440200	1440201	1440202	1440203	1440204	1440205	1440206
			Client Sample ID.:		AW37-2	AW36-1	AW36-2	AW35-1	AW34-1	AW34-2	AV34-1	AV34-2	AV35-1
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.50	0.30	1.60	0.50	1.00	2.00	0.40	1.80	1.00
			Date Sampled:		30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
			Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM		DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	57
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	57
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	130
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.47	< 0.10	< 0.10	0.41	0.62	0.60	< 0.10	0.73	1.4
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.12	0.13	0.13	< 0.10	0.37	0.48
Fluoranthene	M	2800	mg/kg	0.10	0.58	0.21	< 0.10	0.32	0.87	0.60	< 0.10	0.71	3.5
Pyrene	M	2800	mg/kg	0.10	0.60	0.29	< 0.10	0.31	0.80	0.59	< 0.10	0.66	2.9
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.37	< 0.10	< 0.10	< 0.10	0.41	0.26	< 0.10	0.61	2.0
Chrysene	M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	< 0.10	0.30	0.35	< 0.10	0.46	1.8
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	< 0.10	0.73	0.30	< 0.10	0.49	3.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.25	< 0.10	< 0.10	< 0.10	0.34	0.17	< 0.10	0.22	1.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.42	< 0.10	< 0.10	< 0.10	0.28	0.35	< 0.10	0.47	2.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.45	2.4
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25	0.45
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.55	2.1
Total Of 16 PAH's	N	2800	mg/kg	2.0	3.6	< 2.0	< 2.0	< 2.0	4.5	3.4	< 2.0	6.0	24
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	1.2	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440207	1440208	1440209	1440210	1440211
		Client Sample ID.:			AV35-2	AV36-1	AV36-2	AV37-1	AV37-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			2.00	0.30	1.30	0.50	1.60
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
ACM Type	U	2192		N/A		-		-	
Asbestos Identification	U	2192		N/A		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	9.6	12	7.2	11	6.8
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.6	10.0	10.3	10.9	11.0
Cyanide (Total)	M	2300	mg/kg	0.50	3.1	8.0	< 0.50	10	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.64	0.58	4.4	1.0	< 0.50
Iron (Total)	N	2430	mg/kg	100	8700	9000	6100	7800	12000
Arsenic	M	2455	mg/kg	0.5	2.0	2.1	1.3	2.3	1.2
Cadmium	M	2455	mg/kg	0.10	0.24	0.37	0.29	< 0.10	0.26
Chromium	M	2455	mg/kg	0.5	22	22	12	35	55
Manganese	M	2455	mg/kg	1.0	3300	2800	3000	2600	3900
Copper	M	2455	mg/kg	0.50	6.1	11	6.0	5.4	5.3
Mercury	M	2455	mg/kg	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	3.6	5.9	3.7	3.9	3.7
Lead	M	2455	mg/kg	0.50	29	38	34	12	25
Selenium	M	2455	mg/kg	0.25	0.29	0.57	0.29	0.81	0.27
Vanadium	U	2455	mg/kg	0.5	27	26	15	35	55
Zinc	M	2455	mg/kg	0.50	110	130	140	25	46
Organic Matter	M	2625	%	0.40	5.3	11	6.6	4.7	2.1
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	7.3	< 1.0	< 1.0	19
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	14	< 1.0	< 1.0	18
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	16	< 1.0	< 1.0	64
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	140	< 1.0	< 1.0	140
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	170	< 5.0	< 5.0	240
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	2.7	< 1.0	< 1.0	11

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20454	22-20454	22-20454	22-20454	22-20454
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1440207	1440208	1440209	1440210	1440211
		Client Sample ID.:			AV35-2	AV36-1	AV36-2	AV37-1	AV37-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			2.00	0.30	1.30	0.50	1.60
		Date Sampled:			30-May-2022	30-May-2022	30-May-2022	30-May-2022	30-May-2022
		Asbestos Lab:				DURHAM		DURHAM	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	84	< 1.0	< 1.0	120
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	86	< 5.0	< 5.0	130
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	260	< 10	< 10	370
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.43	0.62	< 0.10	0.59
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.15	0.63	< 0.10	2.7
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.15	0.15	< 0.10	0.34
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.19	0.21	< 0.10	0.40
Phenanthrene	M	2800	mg/kg	0.10	1.1	0.86	1.2	0.24	2.9
Anthracene	M	2800	mg/kg	0.10	1.5	0.38	0.60	< 0.10	4.3
Fluoranthene	M	2800	mg/kg	0.10	6.8	2.9	3.5	0.20	23
Pyrene	M	2800	mg/kg	0.10	6.7	2.4	3.3	0.19	24
Benzo[a]anthracene	M	2800	mg/kg	0.10	4.7	1.8	2.9	0.14	15
Chrysene	M	2800	mg/kg	0.10	6.4	2.0	3.9	0.17	21
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	9.2	2.3	5.8	0.22	33
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	2.8	0.80	1.8	0.12	11
Benzo[a]pyrene	M	2800	mg/kg	0.10	7.1	1.9	4.5	0.16	26
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	6.5	1.4	4.2	< 0.10	23
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	1.0	0.35	0.67	< 0.10	3.9
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	5.8	1.4	4.0	< 0.10	22
Total Of 16 PAH's	N	2800	mg/kg	2.0	60	19	38	< 2.0	210
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	1.1	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	1.1	< 0.10	< 0.10

Test Methods

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

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
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The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
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Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-20747-1
Initial Date of Issue:	10-Jun-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	10-Jun-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-Jun-2022
Date Instructed:	06-Jun-2022
Results Due:	10-Jun-2022

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651
Order No.: PO115623		Client Sample Ref.:			AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00
		Date Sampled:			31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-		-		-		-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		No Asbestos Detected
Moisture	N	2030	%	0.020	13	24	1.4	14	22	5.8	18	6.2	19
Soil Colour	N	2040		N/A	Brown	Black	Beige	Brown	Brown	Brown	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.9	9.4	> 12.0	9.6	10.2	10.5	11.5	11.3	10.5
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	68	14	4.4	1.3	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	6.6	16	0.93	68	2.4	1.4	2.2	1.3	1.6
Iron (Total)	N	2430	mg/kg	100	21000	19000	4300	17000	26000	26000	24000	24000	23000
Arsenic	M	2455	mg/kg	0.5	12	29	3.1	12	18	13	6.0	7.9	19
Cadmium	M	2455	mg/kg	0.10	0.34	0.26	0.32	0.14	5.1	0.54	0.80	0.57	0.73
Chromium	M	2455	mg/kg	0.5	26	15	15	13	60	36	68	82	150
Manganese	M	2455	mg/kg	1.0	1300	270	430	480	2900	19000	4900	4200	5700
Copper	M	2455	mg/kg	0.50	30	50	10	16	110	16	17	20	83
Mercury	M	2455	mg/kg	0.05	0.13	0.23	< 0.05	0.05	1.7	0.13	0.13	0.26	0.38
Nickel	M	2455	mg/kg	0.50	18	28	5.2	20	44	24	16	17	33
Lead	M	2455	mg/kg	0.50	97	44	17	31	970	41	82	63	160
Selenium	M	2455	mg/kg	0.25	1.9	2.8	0.49	1.3	2.0	2.3	0.64	1.0	2.4
Vanadium	U	2455	mg/kg	0.5	45	26	12	21	49	78	88	81	110
Zinc	M	2455	mg/kg	0.50	160	73	39	33	5700	170	220	140	240
Organic Matter	M	2625	%	0.40	12	22	13	6.2	14	3.8	9.7	4.7	28
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.1	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	23	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	80	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	110	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747	22-20747
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1441643	1441644	1441645	1441646	1441647	1441648	1441649	1441650	1441651
Order No.: PO115623			Client Sample Ref.:		AR37-2	AR36-2	AR37-1	AS37-2	AR36-1	AS34-1	AS37-1	AS35-1	AS35-2
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.70	1.50	0.40	2.00	0.50	0.40	0.50	0.30	2.00
			Date Sampled:		31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022	31-May-2022
			Asbestos Lab:		COVENTRY		COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	110	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	1.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.82	< 0.10	< 0.10	0.38	0.67
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	< 0.10	0.36	0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.17	< 0.10	< 0.10	0.16	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.60	0.21	< 0.10	0.13	1.1	1.4	0.98	2.3	0.67
Anthracene	M	2800	mg/kg	0.10	0.11	< 0.10	< 0.10	< 0.10	0.58	0.31	0.62	0.59	0.14
Fluoranthene	M	2800	mg/kg	0.10	0.55	0.12	< 0.10	0.50	3.4	2.1	4.1	5.7	1.1
Pyrene	M	2800	mg/kg	0.10	0.46	0.12	< 0.10	0.43	4.2	1.5	4.3	4.3	0.77
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	0.26	2.9	0.87	3.1	2.4	0.43
Chrysene	M	2800	mg/kg	0.10	0.49	< 0.10	< 0.10	0.29	3.3	0.88	4.8	2.6	0.49
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.70	< 0.10	< 0.10	0.29	7.3	1.5	7.3	3.1	0.73
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.24	< 0.10	< 0.10	< 0.10	2.3	0.53	2.4	1.1	0.24
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.50	< 0.10	< 0.10	0.20	5.4	0.89	5.7	2.1	0.41
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	< 0.10	4.3	0.68	5.4	1.7	0.20
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	< 0.10	< 0.10	< 0.10	0.82	0.18	0.85	0.35	0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.40	< 0.10	< 0.10	< 0.10	4.6	0.78	5.0	1.6	0.27
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.0	< 2.0	< 2.0	2.1	42	12	45	29	6.4
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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LOD	Limit of detection

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

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

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

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

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

Final Report

Report No.:	22-20752-1		
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

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.:	22-24801-1
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 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
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2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

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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

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:	01 March 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210216-60
Your Reference:	P18-669
Location:	Llanwern
Report No:	588744

This report has been revised and directly supersedes 588425 in its entirety.

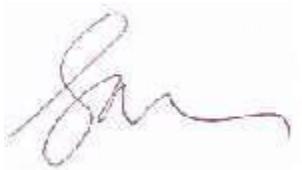
We received 24 samples on Tuesday February 16, 2021 and 24 of these samples were scheduled for analysis which was completed on Monday March 01, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23732928	SPIX-1		0.20 - 0.20	15/02/2021
23732934	SPIX-2		0.20 - 0.20	15/02/2021
23732940	SPIX-3		0.20 - 0.20	15/02/2021
23732922	W104-1		0.20 - 0.20	15/02/2021
23732766	W125-1		0.20 - 0.20	15/02/2021
23732878	W125-2		0.20 - 0.20	15/02/2021
23732945	W204-1		0.20 - 0.20	15/02/2021
23732951	W204-2		0.20 - 0.20	15/02/2021
23732960	W204-3		0.20 - 0.20	15/02/2021
23732779	W204-4		0.20 - 0.20	15/02/2021
23732793	W204-5		0.20 - 0.20	15/02/2021
23732810	W204-6		0.20 - 0.20	15/02/2021
23732822	W204-7		0.20 - 0.20	15/02/2021
23732828	W204-8		0.20 - 0.20	15/02/2021
23732837	W204-9		0.20 - 0.20	15/02/2021
23732845	W204-10		0.20 - 0.20	15/02/2021
23732852	W204-11		0.20 - 0.20	15/02/2021
23732863	W204-12		0.20 - 0.20	15/02/2021
23732870	W204-13		0.20 - 0.20	15/02/2021
23732887	W204-14		0.20 - 0.20	15/02/2021
23732892	W204-15		0.20 - 0.20	15/02/2021
23732898	W204-16		0.20 - 0.20	15/02/2021
23732908	W204-17		0.20 - 0.20	15/02/2021
23732914	W204-18		0.20 - 0.20	15/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23732928		23732934		23732940		23732922		23732766		23732878		23732945		23732951				
Customer Sample Reference			SPIX-1		SPIX-2		SPIX-3		W104-1		W125-1		W125-2		W204-1		W204-2				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X					X			X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24		X			X		X			X			X		X				X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
pH	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 24	X			X		X			X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 24		X			X		X			X			X		X				X	

23732845	W204-10		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732837	W204-9		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732828	W204-8		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732822	W204-7		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732810	W204-6		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732793	W204-5		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23732779	W204-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23732960	W204-3		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23732951	W204-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23732852		23732863		23732870		23732887		23732892		23732898		23732908		23732914				
Customer Sample Reference			W204-11		W204-12		W204-13		W204-14		W204-15		W204-16		W204-17		W204-18				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	X					X				X					X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 24			X		X			X	X			X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
pH	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Sample description	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 24		X		X			X		X		X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 24			X		X			X	X			X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23732928	SPIX-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732934	SPIX-2	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23732940	SPIX-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732922	W104-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732766	W125-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732878	W125-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732945	W204-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732951	W204-2	0.20 - 0.20	Dark Brown	Sand	None	Stones
23732960	W204-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732779	W204-4	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23732793	W204-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732810	W204-6	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	None
23732822	W204-7	0.20 - 0.20	Dark Brown	Sandy Silt Loam	None	Stones
23732828	W204-8	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732837	W204-9	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732845	W204-10	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732852	W204-11	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732863	W204-12	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732870	W204-13	0.20 - 0.20	Dark Brown	Sand	None	Stones
23732887	W204-14	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23732892	W204-15	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23732898	W204-16	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23732908	W204-17	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23732914	W204-18	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		19	18	19	13	14	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0123 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.72 #	3.55 #	4.26 #	8.22 #	2.26 #	8.95 #
pH	1 pH Units	TM133		8.57 M	8.73 M	8.74 M	8.65 M	9.96 M	9.75 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		25.3 M	10.6 M	11.9 M	11.3 M	5.08 M	8.01 M
Cadmium	<0.02 mg/kg	TM181		0.623 M	<0.2 M	0.33 M	<0.02 M	<0.02 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		55.6 M	78.3 M	48.5 M	159 M	238 M	214 M
Copper	<1.4 mg/kg	TM181		14.3 M	15.2 M	16.5 M	24.7 M	21.5 M	23 M
Iron	<1000 mg/kg	TM181		54000 #	54300 #	45400 #	80600 #	142000 #	108000 #
Lead	<0.7 mg/kg	TM181		34.5 M	56.8 M	55.3 M	98.3 M	29.3 M	56.1 M
Manganese	<0.13 mg/kg	TM181		4950 M	3420 M	2520 M	12400 M	17500 M	15500 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<1 M	<1 M	<0.1 M	<0.1 M	<1 M
Nickel	<0.2 mg/kg	TM181		19.4 M	24.6 M	23.9 M	20 M	6.22 M	14.2 M
Selenium	<1 mg/kg	TM181		1.64 #	<10 #	<10 #	5.69 #	3 #	<10 #
Vanadium	<0.2 mg/kg	TM181		91.1 #	111 #	56 #	354 #	248 #	254 #
Zinc	<1.9 mg/kg	TM181		164 M	176 M	208 M	354 M	171 M	180 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	15	14	18	12	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0114 M	0.0118 M	<0.01 M	<0.01 M	<0.01 M	0.0113 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0228 M	0.0354 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	0.0236 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	0.0708 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		30.5 #	38.3 #	3.09 #	4.88 #	62.2 #	62.8 #
pH	1 pH Units	TM133		11.4 M	11.4 M	9.21 M	9.11 M	11.9 M	12 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	2.93 M	2.47 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		5.29 M	6.5 M	12.1 M	8.93 M	2.08 M	1.67 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	1.1 M	0.889 M	3.72 M	<0.02 M	0.512 M
Chromium	<0.9 mg/kg	TM181		232 M	332 M	126 M	156 M	310 M	304 M
Copper	<1.4 mg/kg	TM181		17.9 M	17 M	22.7 M	21 M	9.9 M	7.53 M
Iron	<1000 mg/kg	TM181		117000 #	107000 #	133000 #	125000 #	130000 #	92300 #
Lead	<0.7 mg/kg	TM181		42.5 M	253 M	283 M	393 M	<0.7 M	1.66 M
Manganese	<0.13 mg/kg	TM181		17300 M	15300 M	17000 M	12600 M	24900 M	16200 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	0.207 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		9.57 M	27.9 M	20.1 M	13.9 M	2.89 M	3.66 M
Selenium	<1 mg/kg	TM181		3.75 #	3.83 #	4.94 #	3.94 #	4.96 #	5.97 #
Vanadium	<0.2 mg/kg	TM181		248 #	326 #	490 #	662 #	233 #	228 #
Zinc	<1.9 mg/kg	TM181		189 M	248 M	1310 M	1580 M	48.3 M	48.1 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304				0.01 #			
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304				0.006 #			
Additional Asbestos Components (Using TM048)		TM304				Additional componen #			
Analysts Comments		TM304				Fibre bundles in soil.			
Asbestos Quantification - Total - %	<0.001 %	TM304				0.016 #			

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	14	15	14	13	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0115 M	0.0234 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0115 M	<0.01 M	<0.01 M	<0.01 M	0.0115 M	0.0117 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.506 M	<0.015 M	<0.015 M	0.269 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.529 M	<0.035 M	<0.035 M	0.269 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49 #	38.1 #	52.9 #	47.6 #	26.5 #	18.4 #
pH	1 pH Units	TM133		11.3 M	11.6 M	11 M	11 M	10 M	9.39 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.82 M	6.06 M	7.16 M	5.69 M	4.45 M	4.86 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	0.81 M	<0.02 M	0.946 M	<0.02 M	0.847 M
Chromium	<0.9 mg/kg	TM181		269 M	198 M	219 M	237 M	196 M	392 M
Copper	<1.4 mg/kg	TM181		18.1 M	18.2 M	23.1 M	14.7 M	13.8 M	11 M
Iron	<1000 mg/kg	TM181		107000 #	120000 #	102000 #	90400 #	84900 #	149000 #
Lead	<0.7 mg/kg	TM181		39.8 M	34.5 M	49.8 M	66.5 M	32.8 M	40 M
Manganese	<0.13 mg/kg	TM181		23300 M	12500 M	17200 M	13400 M	12200 M	21900 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		10.9 M	10.3 M	13.2 M	8.17 M	10.5 M	4.57 M
Selenium	<1 mg/kg	TM181		6.56 #	3.35 #	4.16 #	5.48 #	3.21 #	5.44 #
Vanadium	<0.2 mg/kg	TM181		259 #	316 #	252 #	204 #	175 #	404 #
Zinc	<1.9 mg/kg	TM181		174 M	174 M	213 M	260 M	141 M	122 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	16	14	16	12	14
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0119 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0116 M	0.012 M	0.0342 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.789 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.789 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.98 #	24.3 #	41.4 #	41 #	6.43 #	11.4 #
pH	1 pH Units	TM133		11.1 M	11.1 M	9.59 M	10.4 M	11.1 M	11.4 M
Cyanide, Total	<1 mg/kg	TM153		1.29 M	1.17 M	<1 M	<1 M	2.53 M	2.19 M
Arsenic	<0.6 mg/kg	TM181		8.09 M	9.95 M	6.73 M	6.29 M	15 M	13.1 M
Cadmium	<0.02 mg/kg	TM181		0.465 M	0.329 M	<0.02 M	0.727 M	1.86 M	4.03 M
Chromium	<0.9 mg/kg	TM181		132 M	96.4 M	226 M	286 M	213 M	93.2 M
Copper	<1.4 mg/kg	TM181		15.1 M	18.5 M	15 M	14.4 M	22.1 M	23 M
Iron	<1000 mg/kg	TM181		119000 #	136000 #	84800 #	83300 #	209000 #	231000 #
Lead	<0.7 mg/kg	TM181		255 M	381 M	48.5 M	36.3 M	486 M	1050 M
Manganese	<0.13 mg/kg	TM181		13000 M	13700 M	12600 M	14600 M	24300 M	18300 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<0.1 M	<0.1 M	<1 M	0.437 M
Nickel	<0.2 mg/kg	TM181		9.94 M	12.3 M	11.4 M	8.48 M	23.3 M	11.4 M
Selenium	<1 mg/kg	TM181		2.59 #	1.9 #	5.26 #	6.36 #	10.2 #	<1 #
Vanadium	<0.2 mg/kg	TM181		671 #	364 #	202 #	327 #	1180 #	857 #
Zinc	<1.9 mg/kg	TM181		901 M	1250 M	170 M	162 M	1100 M	2360 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.1	92.1	94.8	96.2	96.8	96.4
Acenaphthene-d10 % recovery**	%	TM218		95.8	92.5	93.7	92.5	97.7	94.8
Phenanthrene-d10 % recovery**	%	TM218		97.6	93.3	95.1	95.7	97.9	97.3
Chrysene-d12 % recovery**	%	TM218		86	77.3	79.9	90.2	82	83.8
Perylene-d12 % recovery**	%	TM218		86.4	71.6	73.9	80.4	79.8	78.4
Naphthalene	<9 µg/kg	TM218		90.9 M	77.2 M	75.1 M	24.2 M	23 M	523 M
Acenaphthylene	<12 µg/kg	TM218		55.8 M	43.4 M	49.7 M	<12 M	<12 M	746 M
Acenaphthene	<8 µg/kg	TM218		21.6 M	13.9 M	16.5 M	21.4 M	29.5 M	42.5 M
Fluorene	<10 µg/kg	TM218		48.1 M	29.1 M	30.8 M	16.3 M	12.1 M	141 M
Phenanthrene	<15 µg/kg	TM218		401 M	278 M	289 M	184 M	199 M	1820 M
Anthracene	<16 µg/kg	TM218		97.6 M	76.8 M	94.8 M	40.7 M	49.4 M	1090 M
Fluoranthene	<17 µg/kg	TM218		699 M	591 M	684 M	289 M	696 M	6380 M
Pyrene	<15 µg/kg	TM218		526 M	458 M	518 M	279 M	733 M	5060 M
Benz(a)anthracene	<14 µg/kg	TM218		312 M	268 M	322 M	165 M	568 M	2940 M
Chrysene	<10 µg/kg	TM218		283 M	250 M	297 M	151 M	590 M	3140 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		492 M	370 M	425 M	238 M	1160 M	4850 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		150 M	116 M	142 M	74.7 M	401 M	1570 M
Benzo(a)pyrene	<15 µg/kg	TM218		283 M	222 M	268 M	178 M	839 M	3220 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		285 M	195 M	252 M	169 M	743 M	2700 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		43.1 M	40.5 M	49.3 M	<23 M	111 M	513 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		218 M	180 M	211 M	157 M	662 M	2390 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4010	3210	3720	1990	6810	37100

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		97.3	96.5	95.7	97.5	93.1	95.5
Acenaphthene-d10 % recovery**	%	TM218		99.1	97.8	94.9	96.5	90.8	96.7
Phenanthrene-d10 % recovery**	%	TM218		94.8	97.4	97.5	97.9	91.4	92.9
Chrysene-d12 % recovery**	%	TM218		77.9	84.8	83.3	83.3	81.5	75.6
Perylene-d12 % recovery**	%	TM218		77.5	83.2	74.1	84	70.3	68.8
Naphthalene	<9 µg/kg	TM218		11900 M	5890 M	237 M	206 M	3580 M	2630 M
Acenaphthylene	<12 µg/kg	TM218		4510 M	1760 M	21.9 M	20.2 M	816 M	820 M
Acenaphthene	<8 µg/kg	TM218		280 M	151 M	20.1 M	24.5 M	65.2 M	61.6 M
Fluorene	<10 µg/kg	TM218		4750 M	1140 M	34.9 M	32.8 M	479 M	614 M
Phenanthrene	<15 µg/kg	TM218		29300 M	8110 M	276 M	255 M	4270 M	6050 M
Anthracene	<16 µg/kg	TM218		10000 M	2130 M	78.5 M	104 M	1000 M	2170 M
Fluoranthene	<17 µg/kg	TM218		31500 M	9520 M	561 M	539 M	5940 M	8380 M
Pyrene	<15 µg/kg	TM218		21200 M	6430 M	561 M	531 M	4210 M	5910 M
Benz(a)anthracene	<14 µg/kg	TM218		9910 M	3310 M	328 M	314 M	2100 M	2600 M
Chrysene	<10 µg/kg	TM218		8260 M	2690 M	349 M	348 M	2030 M	2170 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		11100 M	4300 M	572 M	552 M	2440 M	2930 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		4220 M	1340 M	176 M	177 M	759 M	924 M
Benzo(a)pyrene	<15 µg/kg	TM218		7240 M	2550 M	358 M	346 M	1430 M	1930 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		6530 M	2450 M	305 M	308 M	1170 M	1430 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		993 M	414 M	62.2 M	43.7 M	232 M	236 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		4360 M	1690 M	279 M	257 M	867 M	1030 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		166000	53900	4220	4060	31400	39900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		98.9	96.1	94.8	97.7	93.1	94.1
Acenaphthene-d10 % recovery**	%	TM218		97.2	92.6	95.4	97.4	85.4	91.9
Phenanthrene-d10 % recovery**	%	TM218		94.9	93.8	92.9	98.4	87.2	95.1
Chrysene-d12 % recovery**	%	TM218		78.2	92.7	76.4	80.4	78.2	79.1
Perylene-d12 % recovery**	%	TM218		77	85.1	72.9	70.3	73.3	70.8
Naphthalene	<9 µg/kg	TM218		8470 M	6180 M	2620 M	2770 M	3670 M	3020 M
Acenaphthylene	<12 µg/kg	TM218		2550 M	2210 M	884 M	1040 M	1170 M	864 M
Acenaphthene	<8 µg/kg	TM218		232 M	163 M	76.2 M	96.1 M	65.2 M	60.3 M
Fluorene	<10 µg/kg	TM218		1680 M	1590 M	445 M	614 M	708 M	480 M
Phenanthrene	<15 µg/kg	TM218		12200 M	11000 M	4220 M	5880 M	7670 M	5130 M
Anthracene	<16 µg/kg	TM218		3530 M	3350 M	1330 M	1700 M	2230 M	1370 M
Fluoranthene	<17 µg/kg	TM218		17200 M	16700 M	7540 M	9410 M	9610 M	6770 M
Pyrene	<15 µg/kg	TM218		12400 M	11900 M	5360 M	6660 M	6780 M	4770 M
Benz(a)anthracene	<14 µg/kg	TM218		6240 M	6200 M	2760 M	3210 M	3340 M	2270 M
Chrysene	<10 µg/kg	TM218		5260 M	4760 M	2490 M	2710 M	2850 M	1920 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		7940 M	7670 M	3550 M	3950 M	4090 M	2620 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		2650 M	2290 M	1050 M	1240 M	1430 M	836 M
Benzo(a)pyrene	<15 µg/kg	TM218		4750 M	4490 M	2070 M	2280 M	2570 M	1590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		4300 M	3770 M	1840 M	1950 M	2260 M	1340 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		682 M	728 M	311 M	373 M	415 M	253 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2970 M	2820 M	1310 M	1490 M	1680 M	1010 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		93000	85900	37800	45400	50500	34300

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.7	99.2	94.7	96.1	90	88.5
Acenaphthene-d10 % recovery**	%	TM218		96.6	98.1	93.4	97.1	89.8	90.5
Phenanthrene-d10 % recovery**	%	TM218		97.8	99.9	94.3	94.6	88	89
Chrysene-d12 % recovery**	%	TM218		82.1	81	78.2	78.4	75.6	93.5
Perylene-d12 % recovery**	%	TM218		80	74.5	70.6	76.2	76.6	83
Naphthalene	<9 µg/kg	TM218		2910 M	4580 M	1860 M	2680 M	4350 M	7170 M
Acenaphthylene	<12 µg/kg	TM218		625 M	1330 M	663 M	864 M	9020 M	32300 M
Acenaphthene	<8 µg/kg	TM218		134 M	159 M	69.7 M	101 M	685 M	2030 M
Fluorene	<10 µg/kg	TM218		575 M	1580 M	424 M	551 M	19700 M	53000 M
Phenanthrene	<15 µg/kg	TM218		4360 M	8820 M	3890 M	4790 M	89500 M	226000 M
Anthracene	<16 µg/kg	TM218		1150 M	5230 M	839 M	1180 M	42700 M	86000 M
Fluoranthene	<17 µg/kg	TM218		7080 M	13900 M	5480 M	6750 M	111000 M	331000 M
Pyrene	<15 µg/kg	TM218		5150 M	9440 M	4010 M	4840 M	69100 M	204000 M
Benz(a)anthracene	<14 µg/kg	TM218		2600 M	4930 M	1900 M	2450 M	34900 M	109000 M
Chrysene	<10 µg/kg	TM218		2360 M	4270 M	1610 M	2020 M	34600 M	84600 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		3650 M	6310 M	2540 M	3310 M	39800 M	121000 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1060 M	1590 M	855 M	1040 M	13600 M	36500 M
Benzo(a)pyrene	<15 µg/kg	TM218		2180 M	3210 M	1580 M	1920 M	24400 M	71900 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2040 M	2570 M	1230 M	1820 M	18600 M	56700 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		296 M	588 M	273 M	296 M	4280 M	12000 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1470 M	2000 M	967 M	1270 M	13000 M	39700 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		37600	70500	28200	35900	529000	1470000

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99	89	79	85	99	84
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1070	1680
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	<1000	7790	5700	12900
Aliphatics >C21-C35	<1000 µg/kg	TM414		8720	<1000	8800	7680	12400	26800
Aliphatics >C35-C44	<1000 µg/kg	TM414		1700	<1000	5710	<1000	1400	4230
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		11100	<5000	14900	15900	20500	45600
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		22300	<10000	29100	99300	64800	147000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	1190
Aromatics > EC16-EC21	<1000 µg/kg	TM414		1150	<1000	1400	7590	3830	14200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		8880	2860	11400	57300	36900	76900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	<1000	1280	18600	3410	8360
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	2110	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		11200	<5000	14200	83400	44300	101000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		22300	<10000	29100	99300	64800	147000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		22.6 4	32.3 4	95.9	115	8.2	10.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	10.2 4
Aliphatics >C6-C8	<10 µg/kg	TM089		16 4	34.2 4	<10	<10	23.9	50.9 4
Aliphatics >C8-C10	<10 µg/kg	TM089		16 4	35.4 4	17.4	<10	22.8	42.9 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	3340	2170
Aliphatics >C12-C16	<1000 µg/kg	TM414		5500	2730	<1000	<1000	7370	5750
Aliphatics >C16-C21	<1000 µg/kg	TM414		32400	12500	18700	19300	10100	19300
Aliphatics >C21-C35	<1000 µg/kg	TM414		54600	29900	66000	56400	69900	106000
Aliphatics >C35-C44	<1000 µg/kg	TM414		9230	4600	17300	6900	5120	6240
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		102000	50000	103000	83400	95800	140000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		449000	281000	131000	123000	174000	652000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		11.4 4	23.6 4	11.6	<10	14.8	29.4 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		12600	10600	<1000	<1000	4400	4560
Aromatics > EC12-EC16	<1000 µg/kg	TM414		18700	13500	<1000	<1000	9740	37300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		109000	78200	2200	3010	23600	202000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		185000	116000	23700	34000	39500	246000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		20700	12400	<1000	2130	1040	22200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1400	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		347000	231000	27500	39500	78300	512000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		449000	281000	131000	123000	174000	652000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	69.6 4	<50	<50	<50	104 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	69.6 4	<20	<20	<20	104 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		25.5 4	47.3 4	12.6 4	14 4	18.6 4	14.9 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		35.7 4	<10 4	26.9 4	18.7 4	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		44.9 4	10.5 4	25.7 4	16.4 4	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	2300	1470	1790	1720
Aliphatics >C12-C16	<1000 µg/kg	TM414		3540	4790	5490	3710	5170	5520
Aliphatics >C16-C21	<1000 µg/kg	TM414		15700	37900	10700	9390	6810	8370
Aliphatics >C21-C35	<1000 µg/kg	TM414		28600	44100	36200	29600	25200	44200
Aliphatics >C35-C44	<1000 µg/kg	TM414		5740	10200	9550	5380	6010	32600
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		54100	97600	64300	49600	45000	92500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		271000	308000	165000	164000	207000	274000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		29.9 4	<10 4	17.6 4	11.7 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		7190	9060	3520	2920	4560	4850
Aromatics > EC12-EC16	<1000 µg/kg	TM414		12800	14000	7220	6270	8000	8300
Aromatics > EC16-EC21	<1000 µg/kg	TM414		72200	66700	26000	30600	51900	52300
Aromatics > EC21-EC35	<1000 µg/kg	TM414		114000	111000	60700	69400	90600	109000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		10700	10000	3360	5630	6590	6940
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1260	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		217000	211000	101000	115000	162000	182000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		271000	308000	165000	164000	207000	274000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		80.5 4	<50 4	52.7 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		80.5 4	<20 4	52.7 4	<20 4	<20 4	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		79	85.3 2	24.7 4	18.5 4	94	106
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		12.8	34.5 2	<10 4	10.8 4	65	23.4
Aliphatics >C8-C10	<10 µg/kg	TM089		18.6	54.7 2	<10 4	14.4 4	73	36.3
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	1940	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	5610	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		4640	3250	3290	16200	20800	26800
Aliphatics >C21-C35	<1000 µg/kg	TM414		21800	12300	5980	41900	59300	49500
Aliphatics >C35-C44	<1000 µg/kg	TM414		3910	2680	<1000	17400	20700	16200
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		30700	18600	10100	83000	101000	93300
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		77200	118000	57200	245000	712000	1790000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 2	<10 4	<10 4	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		12.8	35.7 2	<10 4	<10 4	49	24.6
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2110	4550	1620	3870	5330	6370
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	3390	2220	9580	12800	51600
Aromatics > EC16-EC21	<1000 µg/kg	TM414		12500	33300	17400	53800	161000	550000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		28900	54600	23600	89000	363000	942000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2060	3740	2240	6040	68800	150000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	10800	27700
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		46500	99600	47000	162000	611000	1700000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		77200	118000	57200	245000	712000	1790000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	89.3 2	<50 4	<50 4	138	59.7
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 2	<50 4	<50 4	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	89.3 2	<20 4	<20 4	138	59.7

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732928	23732934	23732940	23732922	23732766	23732878
			AGS Reference						
Dibromofluoromethane**	%	TM116		111	134	107	110	109	109
Toluene-d8**	%	TM116		99.9	99.4	98.2	98.3	99.8	98.7
4-Bromofluorobenzene**	%	TM116		94.7	97.7	91.9	92.6	95.7	97.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-1	W204-2	W204-3	W204-4	W204-5	W204-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732945	23732951	23732960	23732779	23732793	23732810
			AGS Reference						
Dibromofluoromethane**	%	TM116		103	94.7	114	122	105	105
Toluene-d8**	%	TM116		92.1	95.1	105	100	97	95.1
4-Bromofluorobenzene**	%	TM116		76.3	77.4	104	97.9	102	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<2000 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<1800 M	<1800 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<1400 M	<1400 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<800 M	<800 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<2000 #	<2000 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<2000 M
Naphthalene	<13 µg/kg	TM116		1340 M	3560 M	<260 M	<260 M	<2600 M	3040 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<4	<4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<8000	<8000

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732822	23732828	23732837	23732845	23732852	23732863
			AGS Reference						
Dibromofluoromethane**	%	TM116		99.8	96.3	90.7	97.5	109	95.6
Toluene-d8**	%	TM116		94.1	93.7	90.5	91.3	96.3	91.7
4-Bromofluorobenzene**	%	TM116		77.8	72.8	73.9	73.5	98.1	76.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<1800 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<1400 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<800 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<2000 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<2000 M	<200 M
Naphthalene	<13 µg/kg	TM116		906 M	3240 M	974 M	679 M	<2600 M	729 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<8000	<800

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W204-13	W204-14	W204-15	W204-16	W204-17	W204-18
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			SDG Ref	210216-60	210216-60	210216-60	210216-60	210216-60	210216-60
			Lab Sample No.(s)	23732870	23732887	23732892	23732898	23732908	23732914
			AGS Reference						
Dibromofluoromethane**	%	TM116		107	106 2	109	98	107	107
Toluene-d8**	%	TM116		98.1	98.5 2	94.3	94.2	98.3	97.8
4-Bromofluorobenzene**	%	TM116		88.5	92 2	104	79.1	93.2	90.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 2 M	<2000 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 2 M	<1800 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 2 M	<1400 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 2 M	<800 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 2 #	<2000 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 2 M	<2000 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		2990 M	724 M	<2600 M	466 M	<260 M	862 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4 2	<4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800 2	<8000	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPIX-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732934 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W104-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732922 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W125-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732766 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732945 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-3 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732960 TM048	23/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-5 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732793 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-7 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732822 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-9 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732837 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-11 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732852 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-13 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732870 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-15 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732892 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W204-17 0.20 - 0.20 SOLID 15/02/2021 00:00:00 16/02/2021 05:00:00 210216-60 23732908 TM048	23/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	W204-3	Additional component of Chrysotile detected. (#)	Fibre bundles in soil.	0.0100 (#)	0.0060 (#)	0.016 (#)
Depth (m)	0.20 - 0.20					
Sample Type	SOLID					
Date Sampled	15/02/2021 00:00:00					
Date Received	16/02/2021 05:00:00					
SDG	210216-60					
Original Sample	23732960					
Method Number	TM304					

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210216-60	**Client Reference:**	P18-669	**Report Number:**	588744
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	588425

Test Completion Dates

Lab Sample No(s)	23732928	23732934	23732940	23732922	23732766	23732878	23732945	23732951	23732960	23732779
Customer Sample Ref.	SPIX-1	SPIX-2	SPIX-3	W104-1	W125-1	W125-2	W204-1	W204-2	W204-3	W204-4
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples		23-Feb-2021		23-Feb-2021	23-Feb-2021		23-Feb-2021		23-Feb-2021	
Asbestos Quantification - Full									01-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Metals in solid samples by OES	23-Feb-2021	26-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	24-Feb-2021
PAH by GCMS	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	19-Feb-2021	23-Feb-2021	19-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
VOC MS (S)	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021

Lab Sample No(s)	23732793	23732810	23732822	23732828	23732837	23732845	23732852	23732863	23732870	23732887
Customer Sample Ref.	W204-5	W204-6	W204-7	W204-8	W204-9	W204-10	W204-11	W204-12	W204-13	W204-14
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021		23-Feb-2021		23-Feb-2021		23-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	23-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	23-Feb-2021	22-Feb-2021	19-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	19-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021	23-Feb-2021	21-Feb-2021	21-Feb-2021	23-Feb-2021

Lab Sample No(s)	23732892	23732898	23732908	23732914
Customer Sample Ref.	W204-15	W204-16	W204-17	W204-18
AGS Ref.				
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	22-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	22-Feb-2021	22-Feb-2021	22-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	23-Feb-2021	24-Feb-2021
PAH by GCMS	23-Feb-2021	22-Feb-2021	23-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	19-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	23-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021
VOC MS (S)	23-Feb-2021	21-Feb-2021	21-Feb-2021	21-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Unit 7-8 Hawarden Business Park
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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:	25 February 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210217-69
Your Reference:	P18-669
Location:	Llanwern
Report No:	588256

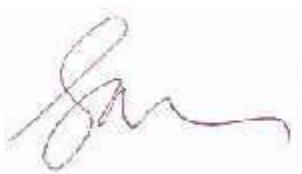
We received 13 samples on Wednesday February 17, 2021 and 13 of these samples were scheduled for analysis which was completed on Thursday February 25, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23740650	SPDL-1		0.20 - 0.20	15/02/2021
23740666	SPDL-2		0.20 - 0.20	15/02/2021
23740683	SPJB-1		0.20 - 0.20	15/02/2021
23740687	SPJB-2		0.20 - 0.20	15/02/2021
23740693	SPJB-3		0.20 - 0.20	15/02/2021
23740604	W106-1		0.20 - 0.20	15/02/2021
23740671	W177-1		0.20 - 0.20	15/02/2021
23740678	W177-2		0.20 - 0.20	15/02/2021
23740700	W191-1		0.20 - 0.20	15/02/2021
23740611	W192-1		0.20 - 0.20	15/02/2021
23740619	W192-2		0.20 - 0.20	15/02/2021
23740629	W204-19		0.20 - 0.20	15/02/2021
23740639	W204-20		0.20 - 0.20	15/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23740650		23740666		23740683		23740687		23740693		23740604		23740671		23740678				
Customer Sample Reference			SPDL-1		SPDL-2		SPJB-1		SPJB-2		SPJB-3		W106-1		W177-1		W177-2				
AGS Reference																					
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20				
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 7			X					X					X					X	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
EPH CWG GC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 13		X			X		X			X		X			X		X		
Metals in solid samples by OES	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
PAH by GCMS	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
pH	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Sample description	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
Total Organic Carbon	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
TPH CWG GC (S)	All	NDPs: 0 Tests: 13	X			X		X			X		X			X		X			X
VOC MS (S)	All	NDPs: 0 Tests: 13		X			X		X			X		X			X		X		

23740639	W204-20		0.20 - 0.20	60g VOC (ALE215)	S
				250g Amber Jar (ALE210)	S
				X	
				1kg TUB with Handle (ALE260)	S
				X	
				60g VOC (ALE215)	S
				X	
23740629	W204-19		0.20 - 0.20	250g Amber Jar (ALE210)	S
				X	
				60g VOC (ALE215)	S
				X	
23740619	W192-2		0.20 - 0.20	250g Amber Jar (ALE210)	S
				X	
				1kg TUB with Handle (ALE260)	S
				X	
				60g VOC (ALE215)	S
				X	
23740611	W192-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
				X	
				60g VOC (ALE215)	S
				X	
23740700	W191-1		0.20 - 0.20	250g Amber Jar (ALE210)	S
				X	
				1kg TUB with Handle (ALE260)	S
				X	
				60g VOC (ALE215)	S
				X	
23740678	W177-2		0.20 - 0.20	60g VOC (ALE215)	S
				X	

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23740650	SPDL-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740666	SPDL-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740683	SPJB-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740687	SPJB-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740693	SPJB-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23740604	W106-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740671	W177-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740678	W177-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740700	W191-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740611	W192-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740619	W192-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740629	W204-19	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23740639	W204-20	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		7.3	10	7.8	8.7	11	17
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0217 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		15.9 #	20.7 #	3.81 #	35.5 #	52.6 #	4.97 #
pH	1 pH Units	TM133		9.22 M	9.51 M	12.8 M	10.6 M	9.09 M	9.83 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.23 M	2.62 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.4 M	8.01 M	<6 M	2.6 M	5.24 M	10.5 M
Cadmium	<0.02 mg/kg	TM181		<0.02 M	<0.02 M	<0.2 M	<0.02 M	<0.02 M	0.0526 M
Chromium	<0.9 mg/kg	TM181		144 M	30.7 M	398 M	301 M	164 M	52.9 M
Copper	<1.4 mg/kg	TM181		14.6 M	12.8 M	28 M	7.04 M	18.2 M	18.4 M
Iron	<1000 mg/kg	TM181		44300 #	19500 #	142000 #	131000 #	96200 #	61800 #
Lead	<0.7 mg/kg	TM181		17.6 M	8.89 M	22.2 M	<0.7 M	14.8 M	93 M
Manganese	<0.13 mg/kg	TM181		9390 M	3080 M	46900 M	23400 M	18900 M	7400 M
Mercury	<0.1 mg/kg	TM181		<0.1 M	<0.1 M	<1 M	<0.1 M	<0.1 M	0.355 M
Nickel	<0.2 mg/kg	TM181		12.7 M	9.22 M	14.1 M	0.802 M	18.3 M	15.7 M
Selenium	<1 mg/kg	TM181		3.41 #	1.75 #	22 #	4.55 #	7.23 #	2.89 #
Vanadium	<0.2 mg/kg	TM181		79.3 #	25.6 #	662 #	284 #	219 #	125 #
Zinc	<1.9 mg/kg	TM181		85.5 M	90.7 M	110 M	41.1 M	78.6 M	443 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	13	13	13	13	21
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		49.7 #	25 #	13.9 #	7.86 #	6.5 #	12.9 #
pH	1 pH Units	TM133		9.19 M	8.79 M	9.02 M	8.87 M	8.75 M	9.41 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	1.25 M
Arsenic	<0.6 mg/kg	TM181		10.6 M	9.39 M	10.4 M	11.6 M	9.5 M	8.67 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.342 M	<0.02 M	<0.02 M	<0.02 M	<0.02 M
Chromium	<0.9 mg/kg	TM181		40.1 M	66.6 M	98 M	45.9 M	64.6 M	162 M
Copper	<1.4 mg/kg	TM181		24.7 M	84.2 M	18.8 M	16.8 M	14.1 M	19.4 M
Iron	<1000 mg/kg	TM181		88600 #	121000 #	87900 #	88800 #	69600 #	121000 #
Lead	<0.7 mg/kg	TM181		85.1 M	90.5 M	101 M	69.3 M	70.1 M	119 M
Manganese	<0.13 mg/kg	TM181		3570 M	3910 M	9370 M	5290 M	4380 M	11600 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	0.265 M	<0.1 M	0.103 M	<0.1 M
Nickel	<0.2 mg/kg	TM181		25.4 M	26 M	19 M	15.9 M	17.9 M	17.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	3.13 #	<1 #	<1 #	1.71 #
Vanadium	<0.2 mg/kg	TM181		78.7 #	59.1 #	279 #	86.9 #	141 #	398 #
Zinc	<1.9 mg/kg	TM181		235 M	285 M	378 M	314 M	289 M	453 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Moisture Content Ratio (% of as received sample)	%	PM024	14
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12 M
Phenol	<0.01 mg/kg	TM062 (S)	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132	6.83 #
pH	1 pH Units	TM133	9.27 M
Cyanide, Total	<1 mg/kg	TM153	<1 M
Arsenic	<0.6 mg/kg	TM181	11.3 M
Cadmium	<0.02 mg/kg	TM181	0.321 M
Chromium	<0.9 mg/kg	TM181	90.4 M
Copper	<1.4 mg/kg	TM181	22.9 M
Iron	<1000 mg/kg	TM181	77600 #
Lead	<0.7 mg/kg	TM181	106 M
Manganese	<0.13 mg/kg	TM181	8500 M
Mercury	<0.1 mg/kg	TM181	<0.1 M
Nickel	<0.2 mg/kg	TM181	23.5 M
Selenium	<1 mg/kg	TM181	3 #
Vanadium	<0.2 mg/kg	TM181	157 #
Zinc	<1.9 mg/kg	TM181	429 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		94.8	93	97.3	94.9	97.2	94.4
Acenaphthene-d10 % recovery**	%	TM218		89.8	89.7	96	92.9	97.3	91.5
Phenanthrene-d10 % recovery**	%	TM218		88.5	89.8	97.3	91.6	97.2	91.6
Chrysene-d12 % recovery**	%	TM218		85.6	91.7	85.3	89.7	80	82.8
Perylene-d12 % recovery**	%	TM218		85	90.2	81.4	90.3	72.7	87.3
Naphthalene	<9 µg/kg	TM218		419 M	512 M	169 M	432 M	919 M	280 M
Acenaphthylene	<12 µg/kg	TM218		642 M	587 M	50.7 M	541 M	1660 M	43 M
Acenaphthene	<8 µg/kg	TM218		30.5 M	37.4 M	228 M	49.7 M	89.7 M	13.2 M
Fluorene	<10 µg/kg	TM218		174 M	252 M	123 M	138 M	542 M	34 M
Phenanthrene	<15 µg/kg	TM218		2380 M	2620 M	2270 M	1760 M	6360 M	201 M
Anthracene	<16 µg/kg	TM218		561 M	734 M	441 M	517 M	1920 M	68.5 M
Fluoranthene	<17 µg/kg	TM218		6150 M	6520 M	4710 M	4050 M	15600 M	415 M
Pyrene	<15 µg/kg	TM218		4600 M	5000 M	4150 M	3040 M	10700 M	362 M
Benz(a)anthracene	<14 µg/kg	TM218		2860 M	3570 M	2380 M	2270 M	6690 M	216 M
Chrysene	<10 µg/kg	TM218		2420 M	2990 M	2790 M	1960 M	6140 M	219 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		4510 M	5330 M	4030 M	3710 M	8580 M	340 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		1440 M	1740 M	1480 M	1150 M	3040 M	127 M
Benzo(a)pyrene	<15 µg/kg	TM218		2620 M	3500 M	2770 M	2170 M	5940 M	222 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2550 M	3180 M	2150 M	2230 M	5100 M	217 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		508 M	614 M	401 M	458 M	1040 M	38.5 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		2020 M	2610 M	1930 M	1790 M	4450 M	195 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		33900	39800	30100	26300	78800	2990

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		90.4	96	92.4	90.4	95.7	95.7
Acenaphthene-d10 % recovery**	%	TM218		84	92.4	87.6	87.4	89.6	89.3
Phenanthrene-d10 % recovery**	%	TM218		82.1	91.4	85.8	86.4	82.6	84
Chrysene-d12 % recovery**	%	TM218		80.5	94.4	83.2	86.9	72.1	75.4
Perylene-d12 % recovery**	%	TM218		81.1	92.6	81.6	88.2	75.6	74.7
Naphthalene	<9 µg/kg	TM218		624 M	519 M	383 M	342 M	242 M	443 M
Acenaphthylene	<12 µg/kg	TM218		1020 M	968 M	233 M	441 M	138 M	165 M
Acenaphthene	<8 µg/kg	TM218		70 M	42.4 M	37.1 M	30.1 M	17.9 M	41.3 M
Fluorene	<10 µg/kg	TM218		371 M	312 M	129 M	404 M	94.3 M	173 M
Phenanthrene	<15 µg/kg	TM218		3190 M	2830 M	1210 M	3340 M	655 M	1030 M
Anthracene	<16 µg/kg	TM218		1060 M	1320 M	344 M	858 M	204 M	290 M
Fluoranthene	<17 µg/kg	TM218		10500 M	10500 M	2140 M	5110 M	1270 M	1680 M
Pyrene	<15 µg/kg	TM218		7760 M	7570 M	1590 M	3490 M	873 M	1150 M
Benz(a)anthracene	<14 µg/kg	TM218		5150 M	5200 M	1160 M	1940 M	551 M	656 M
Chrysene	<10 µg/kg	TM218		4410 M	4350 M	1080 M	1690 M	543 M	659 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		8690 M	7780 M	1770 M	2530 M	807 M	887 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		2490 M	2630 M	572 M	789 M	257 M	277 M
Benzo(a)pyrene	<15 µg/kg	TM218		5120 M	4830 M	1030 M	1580 M	497 M	435 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		5140 M	4470 M	1080 M	1420 M	386 M	384 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		990 M	887 M	216 M	278 M	78.3 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		3920 M	3420 M	816 M	1070 M	385 M	319 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		60500	57600	13800	25300	7000	8580

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Naphthalene-d8 % recovery**	%	TM218	91.9
Acenaphthene-d10 % recovery**	%	TM218	91.4
Phenanthrene-d10 % recovery**	%	TM218	90.2
Chrysene-d12 % recovery**	%	TM218	86.9
Perylene-d12 % recovery**	%	TM218	83.8
Naphthalene	<9 µg/kg	TM218	492 M
Acenaphthylene	<12 µg/kg	TM218	317 M
Acenaphthene	<8 µg/kg	TM218	42.1 M
Fluorene	<10 µg/kg	TM218	196 M
Phenanthrene	<15 µg/kg	TM218	1570 M
Anthracene	<16 µg/kg	TM218	523 M
Fluoranthene	<17 µg/kg	TM218	3560 M
Pyrene	<15 µg/kg	TM218	2570 M
Benz(a)anthracene	<14 µg/kg	TM218	1820 M
Chrysene	<10 µg/kg	TM218	1550 M
Benzo(b)fluoranthene	<15 µg/kg	TM218	2560 M
Benzo(k)fluoranthene	<14 µg/kg	TM218	844 M
Benzo(a)pyrene	<15 µg/kg	TM218	1520 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	1390 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	292 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218	1120 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218	20400

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		56.6 4	45.6 4	116	51.3 4	54.3 4	74.6
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	19.2
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	43.2
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	1030	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1550	<1000	12600	3470	3680	3980
Aliphatics >C21-C35	<1000 µg/kg	TM414		4740	3230	78600	16000	12400	26000
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	28500	1420	1510	10000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		7000	<5000	121000	22200	18400	40400
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		123000	83300	231000	128000	226000	144000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10 4	<10 4	28.8
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1100	11900
Aromatics > EC12-EC16	<1000 µg/kg	TM414		1640	1730	<1000	4150	3810	13800
Aromatics > EC16-EC21	<1000 µg/kg	TM414		19300	12700	17800	20900	35900	34200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		85300	54200	79700	71300	147000	39400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		9600	9330	12400	8770	19800	4530
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1180	1370	1880	1040	2010	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		116000	78400	111000	106000	208000	104000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		123000	78400	231000	128000	226000	144000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50 4	<50 4	62.4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20	<20 4	<20 4	62.4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		52.7 4	45.6 4	39.4 4	54.7 4	44.6 4	52.3 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1020	1050	1530	<1000	<1000	1190
Aliphatics >C16-C21	<1000 µg/kg	TM414		5140	4780	4410	1380	<1000	3780
Aliphatics >C21-C35	<1000 µg/kg	TM414		13300	12200	20700	9240	7380	16200
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	4560	2410	1160	3590
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		20000	18500	31500	13400	9020	25100
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		505000	289000	101000	64200	35200	49100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10 4	<10 4	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1330	1160	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9610	4820	2530	1510	<1000	1510
Aromatics > EC16-EC21	<1000 µg/kg	TM414		121000	54000	11500	12000	5930	4730
Aromatics > EC21-EC35	<1000 µg/kg	TM414		295000	175000	46100	33200	18500	16400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		58400	36200	8590	3540	1330	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		11000	6060	1680	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		485000	271000	69300	50800	26200	24100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		505000	289000	101000	64200	35200	49100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50 4	<50 4	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20 4	<20 4	<20 4	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
GRO Surrogate % recovery**	%	TM089	6.4 4
Aliphatics >C5-C6	<10 µg/kg	TM089	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414	4860
Aliphatics >C21-C35	<1000 µg/kg	TM414	33800
Aliphatics >C35-C44	<1000 µg/kg	TM414	8530
Total Aliphatics >C10-C44	<5000 µg/kg	TM414	48000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414	141000
Aromatics >EC5-EC7	<10 µg/kg	TM089	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414	1940
Aromatics > EC16-EC21	<1000 µg/kg	TM414	14900
Aromatics > EC21-EC35	<1000 µg/kg	TM414	65300
Aromatics >EC35-EC44	<1000 µg/kg	TM414	10100
Aromatics > EC40-EC44	<1000 µg/kg	TM414	1500
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414	93100
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414	141000
Total Aliphatics >C5-C10	<50 µg/kg	TM089	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089	<50 4
GRO >C5-C10	<20 µg/kg	TM089	<20 4

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740650	23740666	23740683	23740687	23740693	23740604
			AGS Reference						
Dibromofluoromethane**	%	TM116		102	102	103	103	101	106
Toluene-d8**	%	TM116		94	98.7	98.5	94.3	86.3	99.3
4-Bromofluorobenzene**	%	TM116		81	88.4	94.7	78.4	82	96.1
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W177-1	W177-2	W191-1	W192-1	W192-2	W204-19
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021	15/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			SDG Ref	210217-69	210217-69	210217-69	210217-69	210217-69	210217-69
			Lab Sample No.(s)	23740671	23740678	23740700	23740611	23740619	23740629
			AGS Reference						
Dibromofluoromethane**	%	TM116		109	96	99.1	109	109	106
Toluene-d8**	%	TM116		99.2	95.4	80.1	98.3	96.6	92.4
4-Bromofluorobenzene**	%	TM116		87.2	81	79.4	87.6	85.6	92
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Customer Sample Ref.	W204-20
Depth (m)	0.20 - 0.20
Sample Type	Soil/Solid (S)
Date Sampled	15/02/2021
Sample Time	.
Date Received	17/02/2021
SDG Ref	210217-69
Lab Sample No.(s)	23740639
AGS Reference	

Component	LOD/Units	Method	
Dibromofluoromethane**	%	TM116	97.6
Toluene-d8**	%	TM116	85.4
4-Bromofluorobenzene**	%	TM116	74.5
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116	<200 M
Benzene	<9 µg/kg	TM116	<180 M
Toluene	<7 µg/kg	TM116	<140 M
Ethylbenzene	<4 µg/kg	TM116	<80 M
p/m-Xylene	<10 µg/kg	TM116	<200 #
o-Xylene	<10 µg/kg	TM116	<200 M
Naphthalene	<13 µg/kg	TM116	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116	<0.4
Sum of BTEX	<40 µg/kg	TM116	<800

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740666 TM048	24/02/2021	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJB-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740687 TM048	23/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W106-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740604 TM048	24/02/2021	Barbara Urbanek-Walsh	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W177-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740678 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W191-1 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740700 TM048	24/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W192-2 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740619 TM048	23/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W204-20 0.20 - 0.20 SOLID 15/02/2021 00:00:00 17/02/2021 05:00:00 210217-69 23740639 TM048	23/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210217-69	**Client Reference:**	P18-669	**Report Number:**	588256
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	

Test Completion Dates

Lab Sample No(s)	23740650	23740666	23740683	23740687	23740693	23740604	23740671	23740678	23740700	23740611
Customer Sample Ref.	SPDL-1	SPDL-2	SPJB-1	SPJB-2	SPJB-3	W106-1	W177-1	W177-2	W191-1	W192-1
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples		24-Feb-2021		23-Feb-2021		24-Feb-2021		23-Feb-2021	24-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
Metals in solid samples by OES	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	24-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	24-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021

Lab Sample No(s)	23740619	23740629	23740639
Customer Sample Ref.	W192-2	W204-19	W204-20
AGS Ref.			
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	23-Feb-2021	23-Feb-2021	23-Feb-2021
Asbestos ID in Solid Samples	23-Feb-2021		23-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	23-Feb-2021	23-Feb-2021	23-Feb-2021
EPH CWG GC (S)	19-Feb-2021	19-Feb-2021	19-Feb-2021
GRO by GC-FID (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021
Metals in solid samples by OES	24-Feb-2021	25-Feb-2021	25-Feb-2021
PAH by GCMS	24-Feb-2021	24-Feb-2021	23-Feb-2021
pH	18-Feb-2021	18-Feb-2021	18-Feb-2021
Phenols by HPLC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021
Sample description	17-Feb-2021	17-Feb-2021	17-Feb-2021
Total Organic Carbon	23-Feb-2021	23-Feb-2021	23-Feb-2021
TPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021
VOC MS (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Rodgers Leask
Office 225
2430/2440
Aztec West
Almondsbury
Bristol
BS32 4QA

Attention: Elliot Thomas

CERTIFICATE OF ANALYSIS

Date of report Generation:	09 March 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210218-32
Your Reference:	P18-669
Location:	Llanwern
Report No:	589805

This report has been revised and directly supersedes 589801 in its entirety.

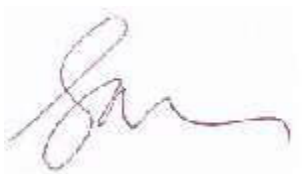
We received 54 samples on Thursday February 18, 2021 and 54 of these samples were scheduled for analysis which was completed on Tuesday March 09, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

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

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23748251	SPDL-1		0.20 - 0.20	16/02/2021
23747881	SPDL-2		0.20 - 0.20	16/02/2021
23747887	SPDL-3		0.20 - 0.20	16/02/2021
23747896	SPDL-4		0.20 - 0.20	16/02/2021
23748172	SPJJ-1		0.20 - 0.20	16/02/2021
23748234	SPJJ-2		0.20 - 0.20	16/02/2021
23748241	SPJJ-3		0.20 - 0.20	16/02/2021
23748245	SPJJ-4		0.20 - 0.20	16/02/2021
23747877	SPLB-1		0.20 - 0.20	16/02/2021
23747944	SPLB-2		0.20 - 0.20	16/02/2021
23748025	SPLB-3		0.20 - 0.20	16/02/2021
23748100	SPLB-4		0.20 - 0.20	16/02/2021
23747902	W35-1		0.20 - 0.20	16/02/2021
23747909	W35-2		0.20 - 0.20	16/02/2021
23747914	W35-3		0.20 - 0.20	16/02/2021
23747921	W35-4		0.20 - 0.20	16/02/2021
23747924	W35-5		0.20 - 0.20	16/02/2021
23747930	W35-6		0.20 - 0.20	16/02/2021
23748130	W129-1		0.20 - 0.20	17/02/2021
23748135	W129-2		0.20 - 0.20	17/02/2021
23747982	W131-1		0.20 - 0.20	17/02/2021
23747988	W131-2		0.20 - 0.20	17/02/2021
23748000	W131-3		0.20 - 0.20	17/02/2021
23748009	W131-4		0.20 - 0.20	17/02/2021
23748017	W156-1		0.20 - 0.20	17/02/2021
23748032	W156-2		0.20 - 0.20	17/02/2021
23748046	W156-3		0.20 - 0.20	17/02/2021
23748052	W156-4		0.20 - 0.20	17/02/2021
23748060	W156-5		0.20 - 0.20	17/02/2021
23748067	W156-6		0.20 - 0.20	17/02/2021
23748072	W156-7		0.20 - 0.20	17/02/2021
23748077	W156-8		0.20 - 0.20	17/02/2021
23748084	W156-9		0.20 - 0.20	17/02/2021
23748094	W206-1		0.20 - 0.20	17/02/2021
23748105	W206-2		0.20 - 0.20	17/02/2021
23748115	W206-3		0.20 - 0.20	17/02/2021
23748120	W206-4		0.20 - 0.20	17/02/2021
23748200	W208-1		0.20 - 0.20	17/02/2021
23748230	W208-2		0.20 - 0.20	17/02/2021
23747937	W209-1		0.20 - 0.20	17/02/2021
23747950	W209-2		0.20 - 0.20	17/02/2021
23747954	W209-3		0.20 - 0.20	17/02/2021
23747961	W209-4		0.20 - 0.20	17/02/2021
23747966	W209-5		0.20 - 0.20	17/02/2021
23747973	W209-6		0.20 - 0.20	17/02/2021
23748089	W156-10		0.20 - 0.20	17/02/2021
23748142	W209B-1		0.20 - 0.20	17/02/2021
23748146	W209B-2		0.20 - 0.20	17/02/2021
23748156	W209B-3		0.20 - 0.20	17/02/2021
23748161	W209B-4		0.20 - 0.20	17/02/2021
23748167	W209C-1		0.20 - 0.20	17/02/2021
23748178	W209C-2		0.20 - 0.20	17/02/2021
23748183	W209C-3		0.20 - 0.20	17/02/2021
23748191	W209C-4		0.20 - 0.20	17/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23748251		23747881		23747887		23747896		23748172			23748234		23748241			23748245	
Customer Sample Reference			SPDL-1		SPDL-2		SPDL-3		SPDL-4		SPJ-1			SPJ-2		SPJ-3			SPJ-4	
AGS Reference																				
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20			0.20 - 0.20		0.20 - 0.20			0.20 - 0.20	
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8											X								
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 54			X		X			X		X			X		X			X	

23747921	W35-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747914	W35-3		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23747909	W35-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747902	W35-1		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23748100	SPLB-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23748025	SPLB-3		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23747944	SPLB-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747877	SPLB-1		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23748245	SPJJ-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

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

			Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type
			23747924	W35-5		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23747930	W35-6		0.20 - 0.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23748130	W129-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23748135	W129-2		0.20 - 0.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23747982	W131-1		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23747988	W131-2		0.20 - 0.20	250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23748000	W131-3		0.20 - 0.20	1kg TUB with Handle (ALE260)	S
							250g Amber Jar (ALE210)	S
							60g VOC (ALE215)	S
			23748009	W131-4		0.20 - 0.20	250g Amber Jar (ALE210)	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54		X		X	X	X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X			X	X	X
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8	X			X	X	X
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54		X		X	X	X
EPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X	X	X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54			X		X	X
Metals in solid samples by OES	All	NDPs: 0 Tests: 54		X		X	X	X
PAH by GCMS	All	NDPs: 0 Tests: 54		X		X	X	X
pH	All	NDPs: 0 Tests: 54		X		X	X	X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54		X		X	X	X
Sample description	All	NDPs: 0 Tests: 54		X		X	X	X
Total Organic Carbon	All	NDPs: 0 Tests: 54		X		X	X	X
TPH CWG GC (S)	All	NDPs: 0 Tests: 54		X		X	X	X
VOC MS (S)	All	NDPs: 0 Tests: 54			X		X	X

23748077	W156-8		0.20 - 0.20	60g VOC (ALE215)	S		
				250g Amber Jar (ALE210)	S	X	
23748072	W156-7		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
23748067	W156-6		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
23748060	W156-5		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
23748052	W156-4		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
23748046	W156-3		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
23748032	W156-2		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
23748017	W156-1		0.20 - 0.20	60g VOC (ALE215)	S		X
				250g Amber Jar (ALE210)	S	X	
				1kg TUB with Handle (ALE260)	S		X
23748009	W131-4		0.20 - 0.20	60g VOC (ALE215)	S		X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23748084		23748094		23748105		23748115		23748120		23748200		23748230		23747937	
Customer Sample Reference			W156-9		W206-1		W206-2		W206-3		W206-4		W208-1		W208-2		W209-1	
AGS Reference																		
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20	
Container			1kg TUB with Handle (ALE260)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27	X		X					X					X					X		
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8			X																	
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
EPH CWG GC (S)	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54		X			X		X			X		X			X		X			
Metals in solid samples by OES	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
PAH by GCMS	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
pH	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
Sample description	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
Total Organic Carbon	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
TPH CWG GC (S)	All	NDPs: 0 Tests: 54	X			X		X			X		X			X		X				X
VOC MS (S)	All	NDPs: 0 Tests: 54		X			X		X			X		X			X		X			

23748156	W209B-3		0.20 - 0.20	1kg TUB with Handle (ALE260)	S		X												
23748146	W209B-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23748142	W209B-1		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23748089	W156-10		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747973	W209-6		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747966	W209-5		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X	X											
23747961	W209-4		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747954	W209-3		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
				1kg TUB with Handle (ALE260)	S		X												
23747950	W209-2		0.20 - 0.20	60g VOC (ALE215)	S						X								X
				250g Amber Jar (ALE210)	S	X			X	X		X	X	X	X	X	X	X	
23747937	W209-1		0.20 - 0.20	60g VOC (ALE215)	S						X								X

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

X Test

N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
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LE - Land Leachate
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UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Lab Sample No(s)			23748156		23748161		23748167		23748178		23748183		23748191	
Customer Sample Reference			W209B-3		W209B-4		W209C-1		W209C-2		W209C-3		W209C-4	
AGS Reference														
Depth (m)			0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20		0.20 - 0.20	
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 27					X					X				
Asbestos Quantification - Full	All	NDPs: 0 Tests: 8										X				
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X
Metals in solid samples by OES	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
PAH by GCMS	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
pH	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Sample description	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
Total Organic Carbon	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 54	X		X			X		X			X		X	
VOC MS (S)	All	NDPs: 0 Tests: 54		X		X			X		X			X		X

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23748251	SPDL-1	0.20 - 0.20	Black	Loamy Sand	Stones	None
23747881	SPDL-2	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Vegetation	Stones
23747887	SPDL-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747896	SPDL-4	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23748172	SPJJ-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23748234	SPJJ-2	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Brick
23748241	SPJJ-3	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	Brick
23748245	SPJJ-4	0.20 - 0.20	Light Brown	Sandy Clay Loam	Stones	Vegetation
23747877	SPLB-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Brick
23747944	SPLB-2	0.20 - 0.20	Dark Brown	Clay	Stones	Vegetation
23748025	SPLB-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23748100	SPLB-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747902	W35-1	0.20 - 0.20	Black	Sandy Silt Loam	Stones	None
23747909	W35-2	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747914	W35-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23747921	W35-4	0.20 - 0.20	Black	Loamy Sand	Stones	Vegetation
23747924	W35-5	0.20 - 0.20	Dark Brown	Sand	None	Stones
23747930	W35-6	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Vegetation
23748130	W129-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	Vegetation
23748135	W129-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23747982	W131-1	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23747988	W131-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748000	W131-3	0.20 - 0.20	Black	Loamy Sand	Stones	None
23748009	W131-4	0.20 - 0.20	Dark Brown	Loamy Sand	Vegetation	Brick
23748017	W156-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748032	W156-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748046	W156-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748052	W156-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748060	W156-5	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Brick
23748067	W156-6	0.20 - 0.20	Dark Brown	Sand	N/A	Stones
23748072	W156-7	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748077	W156-8	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748084	W156-9	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748094	W206-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748105	W206-2	0.20 - 0.20	Black	Loamy Sand	Stones	Vegetation
23748115	W206-3	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	Vegetation
23748120	W206-4	0.20 - 0.20	Black	Loamy Sand	Stones	N/A
23748200	W208-1	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None
23748230	W208-2	0.20 - 0.20	Dark Brown	Sandy Clay Loam	Stones	None

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

			Colour	Description	Inclusions	Inclusions 2
23747937	W209-1	0.20 - 0.20	Light Brown	Silty Clay Loam	Stones	None
23747950	W209-2	0.20 - 0.20	Black	Silty Clay Loam	Stones	None
23747954	W209-3	0.20 - 0.20	Black	Sandy Silt Loam	Stones	Brick
23747961	W209-4	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23747966	W209-5	0.20 - 0.20	Dark Brown	Silty Clay Loam	Brick	Stones
23747973	W209-6	0.20 - 0.20	Black	Silty Clay Loam	Stones	None
23748089	W156-10	0.20 - 0.20	Black	Sandy Silt Loam	Stones	None
23748142	W209B-1	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748146	W209B-2	0.20 - 0.20	Dark Brown	Sand	Vegetation	Stones
23748156	W209B-3	0.20 - 0.20	Dark Brown	Loamy Sand	Stones	Brick
23748161	W209B-4	0.20 - 0.20	Dark Brown	Sand	None	Stones
23748167	W209C-1	0.20 - 0.20	Dark Brown	Stone/Soil	None	Stones
23748178	W209C-2	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None
23748183	W209C-3	0.20 - 0.20	Dark Brown	Stone/Soil	None	Stones
23748191	W209C-4	0.20 - 0.20	Dark Brown	Sandy Loam	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	18	14	14	12	10
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0122 M	<0.01 M	0.0116 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0117 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		0.0351 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0468 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		23.3 #	21.9 #	15.4 #	24.1 #	4.03 #	6.62 #
pH	1 pH Units	TM133		8.33 M	8.98 M	8.18 M	8.78 M	8.73 M	8.95 M
Cyanide, Total	<1 mg/kg	TM153		26.8 M	46 M	26.9 M	46.7 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.29 M	14 M	<6 M	9.28 M	8.86 M	13.2 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.497 M	<0.2 M	0.272 M	0.247 M	0.699 M
Chromium	<0.9 mg/kg	TM181		106 M	37.8 M	26.6 M	40.7 M	65.9 M	88.6 M
Copper	<1.4 mg/kg	TM181		24.1 M	25.6 M	30.5 M	39.8 M	14.6 M	25.7 M
Iron	<1000 mg/kg	TM181		67500 #	41200 #	65600 #	33400 #	50000 #	27300 #
Lead	<0.7 mg/kg	TM181		44.1 M	127 M	38.7 M	93.8 M	48 M	86.3 M
Manganese	<0.13 mg/kg	TM181		9420 M	2510 M	3810 M	3550 M	6920 M	5460 M
Mercury	<0.1 mg/kg	TM181		2.17 M	5.47 M	2.51 M	6.7 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.6 M	28.3 M	18.6 M	29.8 M	20.7 M	23.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	1.62 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		208 #	64.1 #	90.1 #	51.9 #	114 #	135 #
Zinc	<1.9 mg/kg	TM181		118 M	180 M	136 M	246 M	127 M	262 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		12	15	17	26	16	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0121 M	<0.01 M	0.0119 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.36 #	6.57 #	11.7 #	4.88 #	5.98 #	13.5 #
pH	1 pH Units	TM133		8.64 M	8.83 M	8.01 M	8.13 M	8.42 M	8.36 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.67 M	7.53 M	16 M	10.8 M	8.95 M	12.8 M
Cadmium	<0.02 mg/kg	TM181		0.392 M	0.71 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		119 M	43.3 M	60.5 M	61.6 M	401 M	264 M
Copper	<1.4 mg/kg	TM181		<14 M	17.6 M	24.1 M	21.2 M	19.2 M	26.4 M
Iron	<1000 mg/kg	TM181		56500 #	35000 #	36500 #	43300 #	112000 #	78800 #
Lead	<0.7 mg/kg	TM181		58.1 M	49.5 M	51.6 M	39.6 M	34.1 M	72.7 M
Manganese	<0.13 mg/kg	TM181		7230 M	3530 M	2290 M	1230 M	34600 M	10300 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		21 M	25.3 M	31.2 M	39.5 M	19.5 M	32.9 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	19 #	<10 #
Vanadium	<0.2 mg/kg	TM181		136 #	80.2 #	99.5 #	81.2 #	235 #	192 #
Zinc	<1.9 mg/kg	TM181		114 M	127 M	139 M	142 M	87.3 M	215 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		13	12	11	15	10	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0113 M	<0.01 M	<0.01 M	0.0111 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0111 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		59.3 #	3.17 #	5.5 #	29.5 #	2.98 #	7.93 #
pH	1 pH Units	TM133		12.1 M	11.7 M	9.01 M	12.1 M	12 M	8.95 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	1.6 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		7.27 M	7.11 M	9.62 M	8 M	7.46 M	11.6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.241 M	<0.2 M	<0.2 M	<0.2 M	0.232 M
Chromium	<0.9 mg/kg	TM181		289 M	236 M	126 M	307 M	218 M	68.6 M
Copper	<1.4 mg/kg	TM181		36.6 M	125 M	20.1 M	553 M	32.2 M	24.3 M
Iron	<1000 mg/kg	TM181		120000 #	161000 #	71900 #	178000 #	114000 #	53900 #
Lead	<0.7 mg/kg	TM181		109 M	89.3 M	85.8 M	119 M	54.4 M	80.2 M
Manganese	<0.13 mg/kg	TM181		29900 M	31700 M	11400 M	37900 M	22700 M	7030 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		23.8 M	46.3 M	13.6 M	195 M	24.1 M	17.1 M
Selenium	<1 mg/kg	TM181		16.8 #	15.1 #	<10 #	19.3 #	16.8 #	<10 #
Vanadium	<0.2 mg/kg	TM181		638 #	391 #	155 #	770 #	262 #	108 #
Zinc	<1.9 mg/kg	TM181		131 M	321 M	619 M	179 M	110 M	657 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #				<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #				<0.001 #	
Additional Asbestos Components (Using TM048)		TM304		None #				None #	
Analysts Comments		TM304		N/a				0	
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0015 #				<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		11	12	11	12	12	12
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		15.2 #	10.2 #	5.83 #	4.5 #	4.41 #	18.3 #
pH	1 pH Units	TM133		8.74 M	9 M	9.16 M	8.95 M	8.63 M	8.88 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	1.11 M	<1 M	1.11 M	<1 M
Arsenic	<0.6 mg/kg	TM181		<6 M	8.13 M	9.03 M	12.7 M	19.4 M	11.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M	0.376 M
Chromium	<0.9 mg/kg	TM181		89 M	133 M	26.1 M	62.2 M	10.9 M	124 M
Copper	<1.4 mg/kg	TM181		<14 M	18.2 M	41 M	25.1 M	45.5 M	28.6 M
Iron	<1000 mg/kg	TM181		28200 #	84600 #	148000 #	141000 #	233000 #	111000 #
Lead	<0.7 mg/kg	TM181		49.6 M	71.2 M	53.1 M	114 M	85.1 M	121 M
Manganese	<0.13 mg/kg	TM181		7860 M	10500 M	4520 M	6790 M	6260 M	10700 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		15.9 M	20.2 M	27.2 M	27.1 M	43.6 M	25.2 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		350 #	404 #	99.9 #	137 #	99 #	193 #
Zinc	<1.9 mg/kg	TM181		153 M	212 M	168 M	353 M	299 M	373 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		<0.001 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		0					
Asbestos Quantification - Total - %	<0.001 %	TM304		<0.001 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	15	15	12	13	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0118 M	<0.01 M	<0.01 M	<0.01 M	0.0114 M	0.0117 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	0.0228 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		1.86 #	9.88 #	4.29 #	4.03 #	10.4 #	1.46 #
pH	1 pH Units	TM133		12.7 M	8.96 M	9.01 M	11.3 M	10.7 M	12.7 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	3.3 M	<1 M	2.28 M	3.44 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.27 M	15.7 M	11.2 M	9.36 M	<6 M	13.6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	3.53 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		553 M	<9 M	<9 M	155 M	218 M	514 M
Copper	<1.4 mg/kg	TM181		38.6 M	30 M	<14 M	21.7 M	24.4 M	45.7 M
Iron	<1000 mg/kg	TM181		212000 #	352000 #	178000 #	280000 #	156000 #	284000 #
Lead	<0.7 mg/kg	TM181		29.7 M	892 M	<7 M	82.7 M	48.7 M	31.4 M
Manganese	<0.13 mg/kg	TM181		48200 M	8360 M	284 M	19500 M	18400 M	39600 M
Mercury	<0.1 mg/kg	TM181		<1 M	1.25 M	2.06 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		35.5 M	36 M	<2 M	23.2 M	19.8 M	40.6 M
Selenium	<1 mg/kg	TM181		27.7 #	<10 #	<10 #	<10 #	10.5 #	19.4 #
Vanadium	<0.2 mg/kg	TM181		848 #	165 #	2.73 #	550 #	885 #	1000 #
Zinc	<1.9 mg/kg	TM181		62.1 M	2180 M	<19 M	193 M	129 M	82.7 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						0.0349 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						0.0038 #	
Additional Asbestos Components (Using TM048)		TM304						PCM analysis detecte #	
Analysts Comments		TM304						N/A	
Asbestos Quantification - Total - %	<0.001 %	TM304						0.0387 #	

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		15	18	10	14	14	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		7.88 #	8.9 #	4.33 #	9.67 #	75.7 #	5.05 #
pH	1 pH Units	TM133		8.61 M	10.1 M	11.3 M	9.97 M	8.95 M	9.27 M
Cyanide, Total	<1 mg/kg	TM153		3.45 M	<1 M	4.84 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		24.9 M	9.46 M	7.27 M	9.17 M	<6 M	7.44 M
Cadmium	<0.02 mg/kg	TM181		5.2 M	<0.2 M	<0.2 M	0.347 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		106 M	<9 M	225 M	97.9 M	105 M	222 M
Copper	<1.4 mg/kg	TM181		34.1 M	22.8 M	19.5 M	23.6 M	33.5 M	21.5 M
Iron	<1000 mg/kg	TM181		190000 #	243000 #	220000 #	83800 #	65100 #	91600 #
Lead	<0.7 mg/kg	TM181		1040 M	80.8 M	50.9 M	80.9 M	32.7 M	75.7 M
Manganese	<0.13 mg/kg	TM181		13900 M	7350 M	31400 M	7320 M	7680 M	11400 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		35.1 M	26.2 M	16.4 M	29.8 M	21 M	24.7 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	12.4 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		223 #	168 #	1120 #	217 #	236 #	251 #
Zinc	<1.9 mg/kg	TM181		2560 M	233 M	116 M	241 M	92.1 M	274 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304					<0.001 #		
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304					<0.001 #		
Additional Asbestos Components (Using TM048)		TM304					None #		
Analysts Comments		TM304					0		
Asbestos Quantification - Total - %	<0.001 %	TM304					<0.001 #		

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		18	13	17	12	15	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	0.475 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	0.475 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		54.8 #	4.12 #	6.86 #	11.4 #	33.8 #	49.1 #
pH	1 pH Units	TM133		8.43 M	10.4 M	10.6 M	8.83 M	8.97 M	8.96 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	36.1 M	35.9 M	124 M
Arsenic	<0.6 mg/kg	TM181		8.56 M	17.8 M	11.6 M	15.8 M	<6 M	10.1 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	0.382 M	0.448 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		115 M	205 M	104 M	<9 M	142 M	70.2 M
Copper	<1.4 mg/kg	TM181		25.2 M	33.6 M	27.9 M	36.6 M	24.9 M	27.7 M
Iron	<1000 mg/kg	TM181		47800 #	63900 #	61700 #	274000 #	76900 #	90200 #
Lead	<0.7 mg/kg	TM181		32.6 M	146 M	105 M	304 M	158 M	270 M
Manganese	<0.13 mg/kg	TM181		6260 M	10100 M	6800 M	7720 M	6430 M	4820 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	5.87 M	1.84 M	3.44 M
Nickel	<0.2 mg/kg	TM181		26.4 M	25.7 M	24.2 M	44.4 M	22.6 M	20.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		304 #	163 #	150 #	129 #	114 #	72.5 #
Zinc	<1.9 mg/kg	TM181		87.6 M	264 M	285 M	694 M	216 M	191 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		14	12	12	11	14	16
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0116 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		0.0232 M	<0.01 M	<0.01 M	0.0112 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		17.4 #	21.6 #	33.8 #	7.53 #	46.4 #	64.1 #
pH	1 pH Units	TM133		9.08 M	9.15 M	8.71 M	10.4 M	9.32 M	8.93 M
Cyanide, Total	<1 mg/kg	TM153		273 M	41.7 M	31.5 M	1.84 M	1.96 M	4.05 M
Arsenic	<0.6 mg/kg	TM181		12.6 M	11 M	9.56 M	<6 M	9.46 M	8.55 M
Cadmium	<0.02 mg/kg	TM181		0.537 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M	<0.2 M
Chromium	<0.9 mg/kg	TM181		32.3 M	35.5 M	52.2 M	214 M	49 M	38.2 M
Copper	<1.4 mg/kg	TM181		30 M	20 M	33.2 M	19 M	33.5 M	24.7 M
Iron	<1000 mg/kg	TM181		236000 #	22100 #	79700 #	170000 #	85300 #	84200 #
Lead	<0.7 mg/kg	TM181		362 M	127 M	102 M	59.5 M	78 M	71.2 M
Manganese	<0.13 mg/kg	TM181		8310 M	4410 M	4440 M	25900 M	5670 M	8710 M
Mercury	<0.1 mg/kg	TM181		6.12 M	3.73 M	2.36 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		36.4 M	24.7 M	20.9 M	14.9 M	30.3 M	24.5 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	17.9 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		172 #	79.1 #	131 #	1430 #	137 #	77.9 #
Zinc	<1.9 mg/kg	TM181		831 M	245 M	144 M	152 M	172 M	172 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304			<0.001 #				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304			<0.001 #				
Additional Asbestos Components (Using TM048)		TM304			None #				
Analysts Comments		TM304			0				
Asbestos Quantification - Total - %	<0.001 %	TM304			<0.001 #				

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		9.9	15	10	11	12	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 #	<12 M	<12 #	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 #	<0.01 M	<0.01 #	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0222 #	<0.01 M	<0.01 #	0.0112 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 #	<0.015 M	<0.015 #	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 #	<0.035 M	<0.035 #	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		20.3 #	50.3 #	6.84 #	6.9 #	4.84 #	4.64 #
pH	1 pH Units	TM133		8.88 M	9.11 M	10 #	9.64 M	10.6 #	9.58 M
Cyanide, Total	<1 mg/kg	TM153		5.82 M	2.7 M	<1 #	4.41 M	<1 #	2.07 M
Arsenic	<0.6 mg/kg	TM181		<6 M	8.52 M	<6 #	8.2 M	9.58 #	<6 M
Cadmium	<0.02 mg/kg	TM181		<0.2 M	<0.2 M	<0.2 #	<0.2 M	0.212 #	<0.2 M
Chromium	<0.9 mg/kg	TM181		194 M	93.2 M	66.8 #	70 M	213 #	91 M
Copper	<1.4 mg/kg	TM181		24.7 M	21.9 M	<14 #	25.3 M	45.5 #	67.5 M
Iron	<1000 mg/kg	TM181		136000 #	80400 #	76600 #	84600 #	111000 #	58200 #
Lead	<0.7 mg/kg	TM181		79.6 M	72.2 M	67.7 #	202 M	125 #	64.1 M
Manganese	<0.13 mg/kg	TM181		18000 M	10600 M	6420 #	6890 M	20300 #	3960 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 #	<1 M	<1 #	<1 M
Nickel	<0.2 mg/kg	TM181		15.4 M	22.4 M	12.1 #	29.1 M	20.4 #	27.9 M
Selenium	<1 mg/kg	TM181		14 #	<10 #	<10 #	<10 #	13.7 #	<10 #
Vanadium	<0.2 mg/kg	TM181		407 #	173 #	115 #	78.9 #	503 #	105 #
Zinc	<1.9 mg/kg	TM181		177 M	126 M	170 #	374 M	308 #	3020 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304						<0.001 #	
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304						<0.001 #	
Additional Asbestos Components (Using TM048)		TM304						None #	
Analysts Comments		TM304						0	
Asbestos Quantification - Total - %	<0.001 %	TM304						<0.001 #	

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		95.5	89.7	92.2	91.1	97.2	92.3
Acenaphthene-d10 % recovery**	%	TM218		96.4	83.7	93.2	92.9	91.6	96.4
Phenanthrene-d10 % recovery**	%	TM218		101	94.9	94.8	95	89.6	99.7
Chrysene-d12 % recovery**	%	TM218		77.1	91	82.4	78.4	80.6	83.2
Perylene-d12 % recovery**	%	TM218		77.3	85.2	84.1	78.1	78	84.6
Naphthalene	<9 µg/kg	TM218		5310 M	3440 M	5400 M	2610 M	78.7 M	52.8 M
Acenaphthylene	<12 µg/kg	TM218		1960 M	2340 M	1800 M	2530 M	65.7 M	54.6 M
Acenaphthene	<8 µg/kg	TM218		150 M	97.7 M	131 M	96.6 M	10.1 M	12.6 M
Fluorene	<10 µg/kg	TM218		288 M	319 M	294 M	316 M	34 M	28.3 M
Phenanthrene	<15 µg/kg	TM218		2120 M	3240 M	2770 M	2980 M	335 M	266 M
Anthracene	<16 µg/kg	TM218		794 M	1590 M	923 M	1440 M	129 M	72.7 M
Fluoranthene	<17 µg/kg	TM218		3250 M	6230 M	4590 M	5290 M	945 M	592 M
Pyrene	<15 µg/kg	TM218		2400 M	4590 M	3360 M	3840 M	685 M	486 M
Benz(a)anthracene	<14 µg/kg	TM218		1400 M	3030 M	2210 M	2430 M	453 M	286 M
Chrysene	<10 µg/kg	TM218		1550 M	3740 M	2020 M	2540 M	441 M	301 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2890 M	5500 M	4370 M	4850 M	609 M	487 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		899 M	1700 M	1350 M	1480 M	175 M	168 M
Benzo(a)pyrene	<15 µg/kg	TM218		1740 M	3240 M	2590 M	2700 M	333 M	293 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		2660 M	4970 M	4340 M	4580 M	280 M	202 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		389 M	743 M	509 M	579 M	66.7 M	47.9 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		3530 M	5430 M	4430 M	4760 M	264 M	246 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		31300	50200	41100	43000	4900	3600

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92	93	98.1	92.6	93.6	92.5
Acenaphthene-d10 % recovery**	%	TM218		88.1	84.3	93.9	94.1	96.8	96.1
Phenanthrene-d10 % recovery**	%	TM218		88.9	94.9	92.5	93.2	99.2	98.1
Chrysene-d12 % recovery**	%	TM218		84.2	94.3	84.2	83	81.8	79
Perylene-d12 % recovery**	%	TM218		86.4	91.6	83	83.3	82.9	80
Naphthalene	<9 µg/kg	TM218		95.9 M	81.2 M	540 M	92.8 M	588 M	334 M
Acenaphthylene	<12 µg/kg	TM218		80.7 M	83.5 M	164 M	32.8 M	211 M	158 M
Acenaphthene	<8 µg/kg	TM218		10.1 M	<8 M	37.2 M	<8 M	39.3 M	37.1 M
Fluorene	<10 µg/kg	TM218		33.3 M	41.3 M	150 M	40.1 M	166 M	109 M
Phenanthrene	<15 µg/kg	TM218		366 M	402 M	658 M	205 M	928 M	560 M
Anthracene	<16 µg/kg	TM218		110 M	111 M	289 M	64.1 M	292 M	401 M
Fluoranthene	<17 µg/kg	TM218		1170 M	1100 M	1050 M	250 M	1670 M	1250 M
Pyrene	<15 µg/kg	TM218		913 M	837 M	768 M	179 M	1220 M	967 M
Benz(a)anthracene	<14 µg/kg	TM218		520 M	524 M	477 M	109 M	694 M	572 M
Chrysene	<10 µg/kg	TM218		476 M	543 M	505 M	92.5 M	703 M	794 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		755 M	790 M	732 M	143 M	1040 M	977 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		287 M	254 M	235 M	42.7 M	316 M	325 M
Benzo(a)pyrene	<15 µg/kg	TM218		474 M	466 M	421 M	85.8 M	621 M	569 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		367 M	406 M	354 M	65.3 M	444 M	383 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		60.2 M	81 M	82.7 M	<23 M	91.2 M	83.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		365 M	388 M	341 M	63.5 M	465 M	428 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		6080	6110	6810	1460	9490	7950

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
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**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.4	96.9	97.4	93	92.6	87.7
Acenaphthene-d10 % recovery**	%	TM218		97.3	93.9	93.8	100	93.2	89.4
Phenanthrene-d10 % recovery**	%	TM218		97.6	95.3	90.2	104	94.9	91.1
Chrysene-d12 % recovery**	%	TM218		78.4	84.8	80.6	82.9	83.2	87.3
Perylene-d12 % recovery**	%	TM218		75.8	80.8	77.5	85.7	84.6	79.4
Naphthalene	<9 µg/kg	TM218		1500 M	435 M	<90 M	1470 M	285 M	84.7 M
Acenaphthylene	<12 µg/kg	TM218		89.1 M	97.8 M	<120 M	188 M	97.4 M	<60 M
Acenaphthene	<8 µg/kg	TM218		359 M	115 M	<80 M	449 M	71.1 M	<40 M
Fluorene	<10 µg/kg	TM218		265 M	83 M	<100 M	374 M	70.5 M	<50 M
Phenanthrene	<15 µg/kg	TM218		3430 M	1670 M	290 M	5160 M	1340 M	315 M
Anthracene	<16 µg/kg	TM218		620 M	351 M	<160 M	1290 M	387 M	101 M
Fluoranthene	<17 µg/kg	TM218		3760 M	3420 M	603 M	7050 M	2770 M	1080 M
Pyrene	<15 µg/kg	TM218		3170 M	3200 M	488 M	5960 M	2370 M	893 M
Benz(a)anthracene	<14 µg/kg	TM218		1670 M	2270 M	316 M	3470 M	1690 M	616 M
Chrysene	<10 µg/kg	TM218		1830 M	2600 M	354 M	3590 M	1740 M	737 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		2430 M	3650 M	569 M	4460 M	2630 M	1150 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		705 M	1240 M	172 M	1430 M	883 M	378 M
Benzo(a)pyrene	<15 µg/kg	TM218		1430 M	2300 M	325 M	2980 M	1690 M	590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		827 M	1740 M	348 M	1800 M	1440 M	628 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		204 M	420 M	<230 M	359 M	242 M	<115 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1030 M	1800 M	361 M	1910 M	1300 M	547 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		23300	25400	3830	41900	19000	7130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		92.7	93.2	89.6	92.8	90.2	97.1
Acenaphthene-d10 % recovery**	%	TM218		94.9	89.8	87.7	95.6	89	95.5
Phenanthrene-d10 % recovery**	%	TM218		95.9	90.4	90.6	97.5	90.2	95.4
Chrysene-d12 % recovery**	%	TM218		79.4	82.6	88.4	97.4	76.5	79.7
Perylene-d12 % recovery**	%	TM218		78.5	75.3	86	93.3	70.9	76.5
Naphthalene	<9 µg/kg	TM218		299 M	234 M	100 M	95 M	48.5 M	44.9 M
Acenaphthylene	<12 µg/kg	TM218		116 M	159 M	136 M	45.8 M	16.2 M	52 M
Acenaphthene	<8 µg/kg	TM218		248 M	42 M	26 M	11.7 M	<8 M	12 M
Fluorene	<10 µg/kg	TM218		157 M	82.6 M	290 M	19 M	14 M	20 M
Phenanthrene	<15 µg/kg	TM218		1610 M	976 M	1260 M	204 M	138 M	183 M
Anthracene	<16 µg/kg	TM218		430 M	271 M	261 M	49.8 M	28.2 M	<16 M
Fluoranthene	<17 µg/kg	TM218		2400 M	2060 M	1360 M	452 M	177 M	438 M
Pyrene	<15 µg/kg	TM218		2060 M	1560 M	834 M	389 M	137 M	380 M
Benz(a)anthracene	<14 µg/kg	TM218		1140 M	956 M	471 M	285 M	91.3 M	237 M
Chrysene	<10 µg/kg	TM218		1150 M	1000 M	425 M	324 M	108 M	271 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1610 M	1270 M	570 M	546 M	144 M	447 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		509 M	460 M	209 M	173 M	44.5 M	111 M
Benzo(a)pyrene	<15 µg/kg	TM218		1120 M	766 M	328 M	322 M	73.7 M	246 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		635 M	591 M	262 M	291 M	70.5 M	224 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		130 M	135 M	46.7 M	58.4 M	<23 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		727 M	548 M	231 M	281 M	68.6 M	236 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		14300	11100	6810	3550	1160	2900

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.6	94	92.3	91.6	92.6	91.7
Acenaphthene-d10 % recovery**	%	TM218		93.1	89.9	94.2	90.2	93.4	88.4
Phenanthrene-d10 % recovery**	%	TM218		95.5	90.2	96	93.3	89.8	87.2
Chrysene-d12 % recovery**	%	TM218		79.1	78.7	82.9	81.5	78.6	79.6
Perylene-d12 % recovery**	%	TM218		79.9	70.3	82.4	72.4	78.8	77.7
Naphthalene	<9 µg/kg	TM218		358 M	3270 M	3630 M	3200 M	5690 M	553 M
Acenaphthylene	<12 µg/kg	TM218		42.9 M	50.9 M	366 M	758 M	5810 M	76 M
Acenaphthene	<8 µg/kg	TM218		109 M	16.7 M	53.3 M	78.3 M	364 M	135 M
Fluorene	<10 µg/kg	TM218		64.6 M	39.2 M	220 M	440 M	7260 M	92.2 M
Phenanthrene	<15 µg/kg	TM218		986 M	294 M	1470 M	7030 M	102000 M	1280 M
Anthracene	<16 µg/kg	TM218		202 M	64.6 M	368 M	2670 M	41600 M	274 M
Fluoranthene	<17 µg/kg	TM218		1970 M	383 M	2240 M	14100 M	139000 M	2540 M
Pyrene	<15 µg/kg	TM218		1910 M	323 M	1630 M	10600 M	102000 M	2370 M
Benz(a)anthracene	<14 µg/kg	TM218		1200 M	174 M	885 M	4440 M	37900 M	1430 M
Chrysene	<10 µg/kg	TM218		1240 M	171 M	785 M	4910 M	40800 M	1490 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1920 M	284 M	1250 M	6280 M	51200 M	2240 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		725 M	89.1 M	412 M	2060 M	15100 M	839 M
Benzo(a)pyrene	<15 µg/kg	TM218		1500 M	172 M	847 M	4120 M	34400 M	1590 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		879 M	149 M	711 M	3530 M	30800 M	1200 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		162 M	32.1 M	110 M	648 M	4020 M	236 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		1010 M	163 M	639 M	3490 M	27100 M	1180 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		14300	5680	15600	68400	645000	17500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		87.9	92.3	92.1	93.6	91.4	93.3
Acenaphthene-d10 % recovery**	%	TM218		86.8	96.5	96.8	90.5	92.4	93.2
Phenanthrene-d10 % recovery**	%	TM218		91.2	100	98.4	90.9	91.6	94
Chrysene-d12 % recovery**	%	TM218		79	81.1	79.3	84	80.1	82.5
Perylene-d12 % recovery**	%	TM218		70.1	81.7	80.1	80.9	75.5	82.3
Naphthalene	<9 µg/kg	TM218		4410 M	2520 M	2940 M	246 M	892 M	271 M
Acenaphthylene	<12 µg/kg	TM218		65.5 M	202 M	469 M	157 M	169 M	154 M
Acenaphthene	<8 µg/kg	TM218		30.7 M	35.2 M	90.3 M	19.3 M	125 M	21 M
Fluorene	<10 µg/kg	TM218		73.3 M	150 M	381 M	90.3 M	257 M	88.3 M
Phenanthrene	<15 µg/kg	TM218		503 M	945 M	2380 M	655 M	1570 M	717 M
Anthracene	<16 µg/kg	TM218		135 M	234 M	674 M	213 M	309 M	218 M
Fluoranthene	<17 µg/kg	TM218		622 M	1400 M	3650 M	1580 M	1880 M	1700 M
Pyrene	<15 µg/kg	TM218		577 M	1080 M	3030 M	1140 M	1430 M	1240 M
Benz(a)anthracene	<14 µg/kg	TM218		248 M	492 M	1510 M	686 M	857 M	743 M
Chrysene	<10 µg/kg	TM218		241 M	481 M	1540 M	675 M	876 M	631 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		392 M	718 M	2380 M	960 M	1200 M	1080 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		103 M	239 M	714 M	297 M	397 M	329 M
Benzo(a)pyrene	<15 µg/kg	TM218		215 M	443 M	1460 M	556 M	689 M	631 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		171 M	273 M	1040 M	430 M	491 M	514 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		29.3 M	63 M	209 M	106 M	149 M	89 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		172 M	318 M	1160 M	424 M	515 M	442 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		7980	9590	23600	8240	11800	8870

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		91.1	92.4	95.2	95.1	92.7	89.8
Acenaphthene-d10 % recovery**	%	TM218		92	93.9	91.6	96.9	92.5	92.9
Phenanthrene-d10 % recovery**	%	TM218		91.1	94.2	92.2	98.2	92.5	89.2
Chrysene-d12 % recovery**	%	TM218		78.5	78	83.3	80.3	82.8	75.2
Perylene-d12 % recovery**	%	TM218		72.3	79.3	80.3	76.5	78.7	71.8
Naphthalene	<9 µg/kg	TM218		948 M	107 M	98.5 M	2770 M	1190 M	1320 M
Acenaphthylene	<12 µg/kg	TM218		197 M	83.6 M	76.1 M	4750 M	144 M	361 M
Acenaphthene	<8 µg/kg	TM218		153 M	19.2 M	21.9 M	452 M	61.7 M	63.1 M
Fluorene	<10 µg/kg	TM218		303 M	44.4 M	86.8 M	5140 M	118 M	321 M
Phenanthrene	<15 µg/kg	TM218		1990 M	318 M	530 M	17600 M	963 M	1920 M
Anthracene	<16 µg/kg	TM218		394 M	124 M	166 M	<16 M	307 M	419 M
Fluoranthene	<17 µg/kg	TM218		2920 M	799 M	835 M	24500 M	2010 M	2950 M
Pyrene	<15 µg/kg	TM218		2150 M	633 M	655 M	14900 M	1620 M	2220 M
Benz(a)anthracene	<14 µg/kg	TM218		1150 M	379 M	379 M	8920 M	1070 M	1400 M
Chrysene	<10 µg/kg	TM218		923 M	358 M	371 M	8600 M	941 M	1240 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1490 M	577 M	533 M	10800 M	1740 M	2400 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		438 M	193 M	178 M	3240 M	561 M	701 M
Benzo(a)pyrene	<15 µg/kg	TM218		860 M	341 M	298 M	6770 M	1010 M	1380 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		596 M	219 M	245 M	5220 M	840 M	1150 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		150 M	49.5 M	60.3 M	284 M	211 M	275 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		534 M	258 M	230 M	4100 M	865 M	1140 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		15200	4500	4760	118000	13700	19300

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.3	95.7	90.2	93.1	86.4	94.5
Acenaphthene-d10 % recovery**	%	TM218		97.7	90.9	94.3	96.5	83.1	87.6
Phenanthrene-d10 % recovery**	%	TM218		99.8	83.7	90.7	98.7	83.1	87.6
Chrysene-d12 % recovery**	%	TM218		83.6	80.1	77.5	79.8	76.4	79
Perylene-d12 % recovery**	%	TM218		77.3	82.2	71.1	80.5	77.1	66.6
Naphthalene	<9 µg/kg	TM218		9190 M	2100 M	1340 M	4760 M	514 M	439 M
Acenaphthylene	<12 µg/kg	TM218		9760 M	291 M	293 M	1380 M	319 M	145 M
Acenaphthene	<8 µg/kg	TM218		623 M	55.2 M	58.9 M	155 M	30.6 M	32.6 M
Fluorene	<10 µg/kg	TM218		11300 M	157 M	161 M	869 M	151 M	130 M
Phenanthrene	<15 µg/kg	TM218		34300 M	843 M	1350 M	5110 M	1460 M	1120 M
Anthracene	<16 µg/kg	TM218		16800 M	296 M	388 M	2210 M	408 M	302 M
Fluoranthene	<17 µg/kg	TM218		34300 M	2060 M	2780 M	8730 M	2990 M	1800 M
Pyrene	<15 µg/kg	TM218		22800 M	1640 M	2210 M	8290 M	2230 M	1460 M
Benz(a)anthracene	<14 µg/kg	TM218		13300 M	1510 M	1470 M	3790 M	1360 M	955 M
Chrysene	<10 µg/kg	TM218		12100 M	1460 M	1300 M	3830 M	1360 M	1020 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		15500 M	2480 M	2820 M	5390 M	2230 M	1420 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		4020 M	773 M	810 M	1810 M	691 M	390 M
Benzo(a)pyrene	<15 µg/kg	TM218		9200 M	1680 M	1630 M	3110 M	1280 M	786 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		6840 M	1490 M	1410 M	2070 M	1130 M	654 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		389 M	257 M	315 M	423 M	175 M	162 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		5040 M	1350 M	1410 M	2260 M	1030 M	690 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		206000	18400	19800	54200	17400	11500

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		93.3	94.1	92.4	93.4	93.1	94.4
Acenaphthene-d10 % recovery**	%	TM218		94.9	94.7	95.2	95.8	93.2	94
Phenanthrene-d10 % recovery**	%	TM218		95.5	95.3	92.6	97.2	94	94
Chrysene-d12 % recovery**	%	TM218		77.9	74.2	82.1	80.4	80.3	79.7
Perylene-d12 % recovery**	%	TM218		75.5	71	85	81	80.9	79.6
Naphthalene	<9 µg/kg	TM218		12200 M	522 M	1670 #	201 M	822 #	156 M
Acenaphthylene	<12 µg/kg	TM218		13200 M	219 M	3210 #	96.7 M	561 #	70.2 M
Acenaphthene	<8 µg/kg	TM218		822 M	48.8 M	565 #	23.9 M	43.4 #	19.9 M
Fluorene	<10 µg/kg	TM218		5120 M	177 M	5910 #	58.4 M	531 #	50.1 M
Phenanthrene	<15 µg/kg	TM218		52400 M	1540 M	25100 #	463 M	2450 #	295 M
Anthracene	<16 µg/kg	TM218		18500 M	392 M	10500 #	134 M	1590 #	123 M
Fluoranthene	<17 µg/kg	TM218		112000 M	2580 M	30900 #	942 M	4010 #	604 M
Pyrene	<15 µg/kg	TM218		82800 M	2070 M	18600 #	789 M	2960 #	478 M
Benz(a)anthracene	<14 µg/kg	TM218		51900 M	1420 M	9360 #	540 M	1490 #	303 M
Chrysene	<10 µg/kg	TM218		49000 M	1520 M	7280 #	595 M	1240 #	293 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		78500 M	2590 M	9440 #	957 M	1930 #	524 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		23300 M	545 M	3560 #	315 M	636 #	143 M
Benzo(a)pyrene	<15 µg/kg	TM218		45800 M	1440 M	6110 #	575 M	1120 #	290 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		44300 M	1320 M	4080 #	437 M	814 #	253 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		7770 M	310 M	774 #	87.5 M	195 #	49.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		38300 M	1370 M	3220 #	500 M	722 #	254 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		636000	18100	140000	6710	21100	3910

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		77.9	41 4	76.3	74.3	76.2	93.9
Aliphatics >C5-C6	<10 µg/kg	TM089		18.7	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		31.6	<10 4	10.4	25.5	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		58.5	<10 4	36	37.1	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		25600	3300	1430	2260	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		756000	184000	101000	217000	<1000	2660
Aliphatics >C21-C35	<1000 µg/kg	TM414		154000	50000	9470	46300	3910	20200
Aliphatics >C35-C44	<1000 µg/kg	TM414		2350	<1000	<1000	<1000	<1000	4150
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		938000	238000	113000	266000	<5000	27200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		1190000	596000	293000	522000	<10000	51800
Aromatics >EC5-EC7	<10 µg/kg	TM089		28.1	<10 4	39.4	13.9	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		38.6	<10 4	24.4	24.4	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		9890	4920	5620	4580	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9730	10800	6920	10500	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		31900	49100	71500	50400	1250	2590
Aromatics > EC21-EC35	<1000 µg/kg	TM414		168000	255000	78500	157000	3150	19400
Aromatics >EC35-EC44	<1000 µg/kg	TM414		28400	38000	18000	33900	<1000	2600
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5120	6860	2730	6920	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		248000	358000	180000	256000	5450	24600
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		1190000	596000	293000	522000	<10000	51800
Total Aliphatics >C5-C10	<50 µg/kg	TM089		109	<50 4	<50	62.6	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		66.7	<50 4	63.8	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		176	<20 4	63.8	62.6	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		75.3	83.9	84.2	104	89.3	63.5 4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	16.5	<10	<10	<10	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		<1000	<1000	10000	<1000	1000	3640
Aliphatics >C21-C35	<1000 µg/kg	TM414		18400	3410	29900	4580	8670	8940
Aliphatics >C35-C44	<1000 µg/kg	TM414		2090	<1000	4090	<1000	<1000	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		22000	<5000	44300	<5000	10400	13500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		48200	36500	82100	<10000	25300	24900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	10.6	<10	<10	<10	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		2090	<1000	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6150	7850	5720	<1000	2630	1200
Aromatics > EC21-EC35	<1000 µg/kg	TM414		16500	21800	28900	1950	10900	8960
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1450	2040	2180	<1000	1040	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		26200	32700	37800	<5000	14900	11400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		48200	32700	82100	<10000	25300	24900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50 4
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	<20	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		30.1 4	80.4	73.5	35.3	97.6	76.9
Aliphatics >C5-C6	<10 µg/kg	TM089		15 4	<10	<10	13	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		77.1 4	<10	<10	37.8	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		87.4 4	<10	<10	53.1	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		2390	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		11400	2030	<1000	9280	1920	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		27500	10200	4050	22400	8090	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		72900	60700	14300	70600	51300	6090
Aliphatics >C35-C44	<1000 µg/kg	TM414		28300	21700	<1000	15700	16600	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		142000	94700	19100	119000	78000	7250
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		233000	157000	90700	240000	139000	57900
Aromatics >EC5-EC7	<10 µg/kg	TM089		24.2 4	<10	<10	28.3	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		26.5 4	<10	<10	28.3	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		58.7 4	<10	<10	35.4	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1870	<1000	<1000	1360	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8670	<1000	<1000	4890	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		22600	7560	2710	29000	8470	1690
Aromatics > EC21-EC35	<1000 µg/kg	TM414		53600	48000	46700	78200	46900	32700
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3360	5950	22000	7870	5160	16200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1740	1190	<1000	4860
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		90100	62000	71600	121000	61300	50700
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		233000	157000	90700	240000	139000	57900
Total Aliphatics >C5-C10	<50 µg/kg	TM089		179 4	<50	<50	104	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		109 4	<50	<50	92	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		289 4	<20	<20	196	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		37.3 4	61.2 4	99.6	87.4	98.4	84.6
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	1120	<1000	<1000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1070	2080	<1000	5430	<1000	6960
Aliphatics >C21-C35	<1000 µg/kg	TM414		6940	15400	12700	40400	10700	42600
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	2220	3120	3960	2720	9790
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		8870	21400	16600	50000	14000	60400
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		32100	54500	34700	88700	41000	96100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1280	3480	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4390	5450	1250	3390	4600	2110
Aromatics > EC21-EC35	<1000 µg/kg	TM414		17300	23900	13500	28700	15100	28300
Aromatics >EC35-EC44	<1000 µg/kg	TM414		<1000	2570	3380	5290	3850	4800
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	1170	<1000	1880
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		23300	33100	18100	38600	27000	35800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		32100	54500	34700	88700	41000	96100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20 4	<20	<20	<20	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		99.9	115	73.8	79.5	84.7	96.7
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10	12.5	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	17.6	<10	<10	51.3	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	28.1	<10	<10	73	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1190	<1000	1780	13200	13800	1710
Aliphatics >C16-C21	<1000 µg/kg	TM414		11900	16100	14000	119000	369000	12100
Aliphatics >C21-C35	<1000 µg/kg	TM414		61300	46900	57700	142000	147000	95700
Aliphatics >C35-C44	<1000 µg/kg	TM414		27600	11400	21800	40800	15300	54400
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		102000	75100	95200	314000	546000	164000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		142000	117000	136000	379000	1680000	312000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	18.7	<10	<10	49	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	5600	2950	4340	14800	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	1510	55600	1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		5390	3270	6880	13000	436000	24900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		30400	27000	29000	42200	557000	105000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3510	6220	1980	3490	71400	16200
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	1200	<1000	<1000	14700	3740
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		39800	42100	41100	64500	1140000	148000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		142000	117000	136000	379000	1680000	312000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50	137	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20	137	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		86.6	102	83.8	58 4	19.1 4	100
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10	<10	<10 4	15.2 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	13.4	<10	<10 4	62 4	16.8
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	30.5	<10	<10 4	39.8 4	20.2
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1130	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	5880	5580	<1000	4200	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		28800	42800	91800	<1000	13800	3880
Aliphatics >C21-C35	<1000 µg/kg	TM414		61000	99800	93700	10700	22700	24200
Aliphatics >C35-C44	<1000 µg/kg	TM414		17100	38100	31300	1560	3750	4960
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		108000	187000	222000	13300	45600	33500
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		136000	254000	298000	86400	91900	69900
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	20.7	<10	<10 4	26.9 4	13.4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		4610	7920	2820	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	1550	1030	<1000	5150	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2960	10900	17500	18500	11600	6500
Aromatics > EC21-EC35	<1000 µg/kg	TM414		19400	44300	48300	48300	27100	27600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1110	2270	6230	5000	1820	1650
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		28100	67000	75900	73100	46300	36400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		136000	254000	298000	86400	92000	70000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50	<50	<50 4	117 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20	<20	<20 4	117 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		14.7 4	104	118	99.3	94.3	88.5
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10	<10	39.8	20.9
Aliphatics >C6-C8	<10 µg/kg	TM089		41.5 4	27.6	37.2	<10	101	82.4
Aliphatics >C8-C10	<10 µg/kg	TM089		26.8 4	28.8	57.6	14.7	453	128
Aliphatics >C10-C12	<1000 µg/kg	TM414		2010	<1000	<1000	<1000	16900	7100
Aliphatics >C12-C16	<1000 µg/kg	TM414		6100	<1000	<1000	2910	50700	25100
Aliphatics >C16-C21	<1000 µg/kg	TM414		16400	<1000	<1000	29800	56900	60800
Aliphatics >C21-C35	<1000 µg/kg	TM414		29900	9550	5260	15100	71600	37600
Aliphatics >C35-C44	<1000 µg/kg	TM414		6330	2060	1560	4640	9010	5780
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		60800	12700	7220	52400	205000	136000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		122000	22300	16100	1520000	372000	232000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10	<10	23.4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10	<10	14	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		17.1 4	19.6	38.4	10.2	302	84.7
Aromatics > EC10-EC12	<1000 µg/kg	TM414		1250	<1000	<1000	9410	10100	4400
Aromatics > EC12-EC16	<1000 µg/kg	TM414		8900	<1000	<1000	160000	36900	11600
Aromatics > EC16-EC21	<1000 µg/kg	TM414		15500	1400	1440	526000	27800	15100
Aromatics > EC21-EC35	<1000 µg/kg	TM414		34300	7170	6470	664000	75900	55900
Aromatics >EC35-EC44	<1000 µg/kg	TM414		1370	<1000	<1000	113000	16200	8930
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	15900	4530	2210
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		61400	9630	8910	1470000	167000	96000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		122000	22400	16300	1520000	373000	233000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		68.3 4	56.4	94.8	<50	593	231
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50	<50	339	84.7
GRO >C5-C10	<20 µg/kg	TM089		68.3 4	56.4	94.8	<20	932	316

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		78.5	98.2	79.4	78.1	48.1 4	35 4
Aliphatics >C5-C6	<10 µg/kg	TM089		12.8	22.5	19.2	23.5	<10 4	<10 4
Aliphatics >C6-C8	<10 µg/kg	TM089		24.4	69.7	28.3	45.9	<10 4	<10 4
Aliphatics >C8-C10	<10 µg/kg	TM089		30.2	279	87	73.9	<10 4	<10 4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	28300	2910	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		13100	82600	22400	32600	1490	2090
Aliphatics >C16-C21	<1000 µg/kg	TM414		73900	84100	67000	447000	10600	12900
Aliphatics >C21-C35	<1000 µg/kg	TM414		31800	81900	44900	220000	27200	26000
Aliphatics >C35-C44	<1000 µg/kg	TM414		4710	9070	7750	30400	7180	3980
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		124000	286000	145000	730000	46400	45000
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		1150000	462000	281000	960000	160000	178000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	12.9	22.6	11.2	<10 4	<10 4
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10	11.3	15.7	<10 4	<10 4
Aromatics >EC8-EC10	<10 µg/kg	TM089		20.9	185	58.8	49.3	<10 4	<10 4
Aromatics > EC10-EC12	<1000 µg/kg	TM414		15300	14000	4910	5850	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		84700	50000	8980	10700	3880	4650
Aromatics > EC16-EC21	<1000 µg/kg	TM414		345000	35200	31300	71400	21600	26900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		499000	57100	79700	116000	79700	91500
Aromatics >EC35-EC44	<1000 µg/kg	TM414		79300	20200	11500	25900	7370	9770
Aromatics > EC40-EC44	<1000 µg/kg	TM414		13300	6830	2810	8370	<1000	1220
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		1020000	176000	136000	230000	113000	133000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		1150000	463000	282000	961000	160000	178000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		67.3	371	134	143	<50 4	<50 4
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	198	92.7	76.2	<50 4	<50 4
GRO >C5-C10	<20 µg/kg	TM089		67.3	569	227	220	<20 4	<20 4

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		48.7 4	16.2 4	82.8	91.4	73.5	76
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	33 4	<10	<10	11.4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		21.1 4	155 4	13.3	17	18.2	12.3
Aliphatics >C8-C10	<10 µg/kg	TM089		26.6 4	117 4	34.4	35	41	22.4
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		1930	<1000	5590	2360	3550	1460
Aliphatics >C16-C21	<1000 µg/kg	TM414		12400	11100	9960	4870	11200	3720
Aliphatics >C21-C35	<1000 µg/kg	TM414		38000	25700	95300	27700	35400	18000
Aliphatics >C35-C44	<1000 µg/kg	TM414		10400	5070	97000	13900	30300	6520
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		62800	42800	208000	48800	80600	29900
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		356000	114000	340000	100000	290000	76600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10 4	<10	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	14.2 4	<10	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		17.8 4	77.9 4	22.2	23.7	27.4	15.7
Aromatics > EC10-EC12	<1000 µg/kg	TM414		2350	<1000	1020	<1000	4930	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		9060	2780	13000	<1000	9740	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		80800	14000	27200	5480	63700	5040
Aromatics > EC21-EC35	<1000 µg/kg	TM414		184000	48800	86800	42100	120000	34000
Aromatics >EC35-EC44	<1000 µg/kg	TM414		17400	4700	3700	3260	10800	7380
Aromatics > EC40-EC44	<1000 µg/kg	TM414		2400	1570	<1000	1240	2840	1300
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		294000	70800	132000	51400	210000	46800
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		356000	114000	340000	100000	290000	76700
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	304 4	<50	52	70.7	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	92 4	<50	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	396 4	<20	52	70.7	<20

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748251	23747881	23747887	23747896	23748172	23748234
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	101	110	102	109	109
Toluene-d8**	%	TM116		92.8	89.6	93.7	91.9	94.6	95.3
4-Bromofluorobenzene**	%	TM116		96.6	84.6	101	90.9	101	103
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		478 M	561 M	545 M	397 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2	SPLB-3	SPLB-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748241	23748245	23747877	23747944	23748025	23748100
			AGS Reference						
Dibromofluoromethane**	%	TM116		111	108	106	109	108	105
Toluene-d8**	%	TM116		95.6	94	95.4	95.5	92.1	95.9
4-Bromofluorobenzene**	%	TM116		102	99.4	101	106	97.2	94.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747902	23747909	23747914	23747921	23747924	23747930
			AGS Reference						
Dibromofluoromethane**	%	TM116		97.3	105	109	93.5	110	110
Toluene-d8**	%	TM116		93.2	98.6	99.1	96.1	95.7	96.5
4-Bromofluorobenzene**	%	TM116		77.3	95.7	90.6	79.7	103	93
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	179 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	406 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W129-1	W129-2	W131-1	W131-2	W131-3	W131-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748130	23748135	23747982	23747988	23748000	23748009
			AGS Reference						
Dibromofluoromethane**	%	TM116		104	104	111	107	105	107
Toluene-d8**	%	TM116		93.2	92.3	95.3	99.6	98.4	99.9
4-Bromofluorobenzene**	%	TM116		92.9	88.6	103	95.1	96.7	97.3
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748017	23748032	23748046	23748052	23748060	23748067
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	108	106	106	98.3	106
Toluene-d8**	%	TM116		93.8	94.1	101	99.6	93.9	94.8
4-Bromofluorobenzene**	%	TM116		105	102	94.9	93.1	82.2	106
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	489 M	1890 M	491 M	1760 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748072	23748077	23748084	23748094	23748105	23748115
			AGS Reference						
Dibromofluoromethane**	%	TM116		108	107	103	116	93.1	106
Toluene-d8**	%	TM116		98.3	97.6	97.9	94.7	86.6	95.5
4-Bromofluorobenzene**	%	TM116		92.1	97.3	93.9	101	74.1	103
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		517 M	583 M	376 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W206-4	W208-1	W208-2	W209-1	W209-2	W209-3
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748120	23748200	23748230	23747937	23747950	23747954
			AGS Reference						
Dibromofluoromethane**	%	TM116		96.4	104	107	110	106	106
Toluene-d8**	%	TM116		83.3	92.6	97.5	95.7	93.7	92.6
4-Bromofluorobenzene**	%	TM116		70.9	91.2	92.5	105	96.9	94.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		350 M	<260 M	<260 M	<260 M	619 M	569 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23747961	23747966	23747973	23748089	23748142	23748146
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	107	113	106	107	110
Toluene-d8**	%	TM116		99.5	94.4	94.4	100	92.4	91.4
4-Bromofluorobenzene**	%	TM116		97	93.6	95	91.7	87.6	86.9
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		581 M	386 M	381 M	43000 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	W209B-3	W209B-4	W209C-1	W209C-2	W209C-3	W209C-4
			Depth (m)	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021	17/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
			SDG Ref	210218-32	210218-32	210218-32	210218-32	210218-32	210218-32
			Lab Sample No.(s)	23748156	23748161	23748167	23748178	23748183	23748191
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	104	108	106	108	110
Toluene-d8**	%	TM116		93.6	97.1	93.8	97.9	97.5	94.8
4-Bromofluorobenzene**	%	TM116		94.7	84	100	89.1	87.7	101
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 #	<200 M	<200 #	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 #	<180 M	<180 #	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 #	<140 M	<140 #	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 #	<80 M	<80 #	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 #	<200 M	<200 #	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	621 #	<260 M	1560 #	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748251 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPDL-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747887 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748172 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748241 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLB-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747877 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPLB-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748025 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747902 TM048	25/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-3 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747914 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG: 210218-32 **Client Reference:** P18-669 **Report Number:** 589805
Location: Llanwern **Order Number:** 108282 **Superseded Report:** 589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-5 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747924 TM048	25/02/2021	Paul Poynton	Loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W129-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748130 TM048	26/02/2021	Marcin Magdziarek	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W131-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747982 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W131-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748000 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748017 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748046 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748060 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-7 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748072 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-9 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748084 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG: 210218-32 **Client Reference:** P18-669 **Report Number:** 589805
Location: Llanwern **Order Number:** 108282 **Superseded Report:** 589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748094 TM048	25/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748115 TM048	26/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W208-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748200 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747937 TM048	25/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747954 TM048	25/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747966 TM048	26/02/2021	Agnieszka Chelmowska	Loose fibres in soil	Not Detected (#)	Trace (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209B-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748142 TM048	25/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209B-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748156 TM048	26/02/2021	Agnieszka Chelmowska	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209C-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748167 TM048	25/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	W209C-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748183 TM048	01/03/2021	Paul Poynton	Loose fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&♦§@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	SPJJ-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748172 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-1 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747902 TM304	None (#)	N/a	<0.001 (#)	<0.001 (#)	0.0015 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W35-5 0.20 - 0.20 SOLID 16/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747924 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W129-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748130 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W156-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748060 TM304	PCM analysis detected fibres typical of amphibole asbestos. (#)	N/A	0.0349 (#)	0.0038 (#)	0.0387 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W206-1 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748094 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209-5 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23747966 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	W209C-3 0.20 - 0.20 SOLID 17/02/2021 00:00:00 18/02/2021 05:00:00 210218-32 23748183 TM304	None (#)	-	<0.001 (#)	<0.001 (#)	<0.001 (#)

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Test Completion Dates

Lab Sample No(s)	23748251	23747881	23747887	23747896	23748172	23748234	23748241	23748245	23747877	23747944
Customer Sample Ref.	SPDL-1	SPDL-2	SPDL-3	SPDL-4	SPJJ-1	SPJJ-2	SPJJ-3	SPJJ-4	SPLB-1	SPLB-2
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		26-Feb-2021		26-Feb-2021		26-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full					05-Mar-2021					
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021
GRO by GC-FID (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	25-Feb-2021	03-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021
PAH by GCMS	25-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	26-Feb-2021
pH	22-Feb-2021	19-Feb-2021	23-Feb-2021	19-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	24-Feb-2021	24-Feb-2021
Sample description	19-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23748025	23748100	23747902	23747909	23747914	23747921	23747924	23747930	23748130	23748135
Customer Sample Ref.	SPLB-3	SPLB-4	W35-1	W35-2	W35-3	W35-4	W35-5	W35-6	W129-1	W129-2
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	26-Feb-2021		25-Feb-2021		25-Feb-2021		25-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full			09-Mar-2021				05-Mar-2021		08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	24-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
EPH CWG GC (S)	24-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021	08-Mar-2021	01-Mar-2021
PAH by GCMS	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	23-Feb-2021	22-Feb-2021	23-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021
Sample description	19-Feb-2021	19-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23747982	23747988	23748000	23748009	23748017	23748032	23748046	23748052	23748060	23748067
Customer Sample Ref.	W131-1	W131-2	W131-3	W131-4	W156-1	W156-2	W156-3	W156-4	W156-5	W156-6
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	26-Feb-2021		26-Feb-2021		25-Feb-2021		26-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full									08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	26-Feb-2021	26-Feb-2021	22-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	23-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	25-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
Metals in solid samples by OES	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021
PAH by GCMS	01-Mar-2021	25-Feb-2021	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	23-Feb-2021	26-Feb-2021	23-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	25-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Validated

CERTIFICATE OF ANALYSIS

SDG:	210218-32	**Client Reference:**	P18-669	**Report Number:**	589805
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	589801

Lab Sample No(s)	23748072	23748077	23748084	23748094	23748105	23748115	23748120	23748200	23748230	23747937
Customer Sample Ref.	W156-7	W156-8	W156-9	W206-1	W206-2	W206-3	W206-4	W208-1	W208-2	W209-1
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		25-Feb-2021	25-Feb-2021		26-Feb-2021		26-Feb-2021		25-Feb-2021
Asbestos Quantification - Full				08-Mar-2021						
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	22-Feb-2021	23-Feb-2021	24-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	08-Mar-2021	01-Mar-2021	06-Mar-2021	01-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021
PAH by GCMS	01-Mar-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021	26-Feb-2021	23-Feb-2021	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	22-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	25-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	19-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23747950	23747954	23747961	23747966	23747973	23748089	23748142	23748146	23748156	23748161
Customer Sample Ref.	W209-2	W209-3	W209-4	W209-5	W209-6	W156-10	W209B-1	W209B-2	W209B-3	W209B-4
AGS Ref.										
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	01-Mar-2021	01-Mar-2021	01-Mar-2021	23-Feb-2021	01-Mar-2021	01-Mar-2021	25-Feb-2021	25-Feb-2021	01-Mar-2021	25-Feb-2021
Asbestos ID in Solid Samples		25-Feb-2021		26-Feb-2021			25-Feb-2021		26-Feb-2021	
Asbestos Quantification - Full				05-Mar-2021						
Cyanide Comp/Free/Total/Thiocyanate	22-Feb-2021	01-Mar-2021	01-Mar-2021	22-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	22-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	22-Feb-2021	22-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	01-Mar-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	01-Mar-2021	01-Mar-2021	08-Mar-2021	25-Feb-2021	01-Mar-2021	02-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021
PAH by GCMS	26-Feb-2021	26-Feb-2021	25-Feb-2021	24-Feb-2021	26-Feb-2021	25-Feb-2021	01-Mar-2021	01-Mar-2021	23-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021	23-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	23-Feb-2021	23-Feb-2021	22-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021	23-Feb-2021	25-Feb-2021	23-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021	18-Feb-2021	19-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	01-Mar-2021
TPH CWG GC (S)	01-Mar-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	26-Feb-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Lab Sample No(s)	23748167	23748178	23748183	23748191
Customer Sample Ref.	W209C-1	W209C-2	W209C-3	W209C-4
AGS Ref.				
Depth	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20	0.20 - 0.20
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	25-Feb-2021	01-Mar-2021	25-Feb-2021	01-Mar-2021
Asbestos ID in Solid Samples	25-Feb-2021		01-Mar-2021	
Asbestos Quantification - Full			08-Mar-2021	
Cyanide Comp/Free/Total/Thiocyanate	01-Mar-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
EPH CWG GC (S)	22-Feb-2021	24-Feb-2021	24-Feb-2021	24-Feb-2021
GRO by GC-FID (S)	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
Metals in solid samples by OES	01-Mar-2021	02-Mar-2021	02-Mar-2021	25-Feb-2021
PAH by GCMS	26-Feb-2021	25-Feb-2021	25-Feb-2021	25-Feb-2021
pH	19-Feb-2021	19-Feb-2021	19-Feb-2021	19-Feb-2021
Phenols by HPLC (S)	23-Feb-2021	24-Feb-2021	23-Feb-2021	25-Feb-2021
Sample description	18-Feb-2021	18-Feb-2021	18-Feb-2021	18-Feb-2021
Total Organic Carbon	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021
TPH CWG GC (S)	26-Feb-2021	01-Mar-2021	01-Mar-2021	26-Feb-2021
VOC MS (S)	26-Feb-2021	26-Feb-2021	26-Feb-2021	26-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

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Final Report

Report No.:	21-21180-1
Initial Date of Issue:	29-Jun-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	David McCarroll Chris Wilson
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	.
No. of Samples:	3
Turnaround (Wkdays):	5
Date Approved:	29-Jun-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	22-Jun-2021
Date Instructed:	22-Jun-2021
Results Due:	28-Jun-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180	21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225698	1225700
Order No.: .			Client Sample Ref.:		R-CSP-1	R-CSP-2
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		18-Jun-2021	18-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Moisture	N	2030	%	0.020	2.2	2.2
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Gravel	Gravel
pH	M	2010		4.0	11.2	11.6
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.78	0.93
Iron (Total)	N	2430	mg/kg	100	13000	16000
Arsenic	M	2450	mg/kg	1.0	8.8	13
Cadmium	M	2450	mg/kg	0.10	0.25	0.40
Chromium	M	2450	mg/kg	1.0	62	66
Manganese	M	2450	mg/kg	5.0	2900	3200
Copper	M	2450	mg/kg	0.50	6.3	8.5
Mercury	M	2450	mg/kg	0.10	< 0.10	0.11
Nickel	M	2450	mg/kg	0.50	11	12
Lead	M	2450	mg/kg	0.50	35	55
Selenium	M	2450	mg/kg	0.20	0.67	< 0.20
Vanadium	U	2450	mg/kg	5.0	65	92
Zinc	M	2450	mg/kg	0.50	110	160
Organic Matter	M	2625	%	0.40	1.7	3.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	54	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	54	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	180	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	180	< 5.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180	21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225698	1225700
Order No.: .			Client Sample Ref.:		R-CSP-1	R-CSP-2
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		18-Jun-2021	18-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	230	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	0.23	0.31
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.16
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.63	0.91
Anthracene	M	2800	mg/kg	0.10	0.15	0.26
Fluoranthene	M	2800	mg/kg	0.10	1.4	1.9
Pyrene	M	2800	mg/kg	0.10	1.0	1.2
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.60	0.85
Chrysene	M	2800	mg/kg	0.10	0.55	0.84
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.84	1.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.48	0.42
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.56	0.79
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.61	0.34
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.49	0.37
Total Of 16 PAH's	N	2800	mg/kg	2.0	7.6	9.6
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.3
Electrical Conductivity	U	1020	µS/cm	1.0	790
Suspended Solids At 105C	U	1030	mg/l	5.0	66
Total Dissolved Solids	N	1020	mg/l	1.0	510
Turbidity	N	1060	NTU	1.0	86
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	7.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	40
Dissolved Oxygen	N	1150	mg O2/l	0.50	8.0
Redox Potential	N	1170	mV	N/A	38
Chloride	U	1220	mg/l	1.0	60
Fluoride	U	1220	mg/l	0.050	0.62
Ammoniacal Nitrogen	U	1220	mg/l	0.050	1.7
Phosphorus (Total)	N	1220	mg/l	0.020	0.040
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.039
Sulphur	N	1220	mg/l	1.0	47
Sulphate	U	1220	mg/l	1.0	140
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	74
Magnesium	U	1455	mg/l	0.20	12
Total Calcium	N	1455	mg/l	5.0	75
Total Magnesium	N	1455	mg/l	0.50	13
Total Hardness as CaCO3	U	1270	mg/l	15	240
Arsenic (Dissolved)	U	1455	µg/l	0.20	3.6
Boron (Dissolved)	U	1455	µg/l	10.0	150
Barium (Dissolved)	U	1455	µg/l	5.00	78
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	5.8
Copper (Dissolved)	U	1455	µg/l	0.50	2.4
Iron (Dissolved)	N	1455	µg/l	5.0	11
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	260
Nickel (Dissolved)	U	1455	µg/l	0.50	14
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	1.2
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.6
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5
Arsenic (Total)	N	1455	µg/l	0.20	3.4
Boron (Total)	N	1455	µg/l	10.0	160
Barium (Total)	N	1455	µg/l	5.00	79
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	5.7
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	11
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	260
Nickel (Total)	N	1455	µg/l	0.50	14
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	< 0.50
Selenium (Total)	N	1455	µg/l	0.50	0.84
Vanadium (Total)	N	1455	µg/l	0.50	6.6
Zinc (Total)	N	1455	µg/l	2.5	< 2.5
Chromium (Hexavalent)	U	1490	µg/l	20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	9.3
Total Inorganic Carbon	N	1220	mg/l	2.5	43
Total Organic Carbon	U	1610	mg/l	2.0	9.2
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-21180
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1225699
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		21-Jun-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

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

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	21-26393-1
Initial Date of Issue:	12-Aug-2021
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	.
No. of Samples:	3
Turnaround (Wkdays):	5
Date Approved:	06-Aug-2021
Approved By:	
Details:	Glynn Harvey, Technical Manager

Date Received:	02-Aug-2021
Date Instructed:	02-Aug-2021
Results Due:	06-Aug-2021

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			21-26393	21-26393
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1251520	1251521
Order No.: .		Client Sample Ref.:			R-CSP-3	R-CSP-4
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.2	0.2
		Bottom Depth (m):			0.2	0.2
		Date Sampled:			29-Jul-2021	29-Jul-2021
		Asbestos Lab:			NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	8.5	7.8
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	10.1	11.1
Cyanide (Total)	M	2300	mg/kg	0.50	1.4	1.5
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.75	20
Iron (Total)	N	2430	mg/kg	100	25000	23000
Arsenic	M	2450	mg/kg	1.0	19	15
Cadmium	M	2450	mg/kg	0.10	1.1	1.4
Chromium	M	2450	mg/kg	1.0	90	260
Manganese	M	2450	mg/kg	5.0	6000	11000
Copper	M	2450	mg/kg	0.50	70	130
Mercury	M	2450	mg/kg	0.10	0.46	0.34
Nickel	M	2450	mg/kg	0.50	28	22
Lead	M	2450	mg/kg	0.50	170	230
Selenium	M	2450	mg/kg	0.20	0.51	0.53
Vanadium	U	2450	mg/kg	5.0	120	230
Zinc	M	2450	mg/kg	0.50	530	640
Organic Matter	M	2625	%	0.40	5.2	3.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393	21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251520	1251521
Order No.: .			Client Sample Ref.:		R-CSP-3	R-CSP-4
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		29-Jul-2021	29-Jul-2021
			Asbestos Lab:		NEW-ASB	NEW-ASB
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	1.9	1.0
Anthracene	M	2800	mg/kg	0.10	0.43	0.22
Fluoranthene	M	2800	mg/kg	0.10	3.3	1.7
Pyrene	M	2800	mg/kg	0.10	2.8	1.5
Benzo[a]anthracene	M	2800	mg/kg	0.10	1.6	0.78
Chrysene	M	2800	mg/kg	0.10	2.0	1.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	2.8	1.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.91	0.45
Benzo[a]pyrene	M	2800	mg/kg	0.10	1.5	0.77
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.5	0.89
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.26	0.15
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.5	0.93
Total Of 16 PAH's	N	2800	mg/kg	2.0	21	11
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.1
Electrical Conductivity	U	1020	µS/cm	1.0	860
Suspended Solids At 105C	U	1030	mg/l	5.0	19
Total Dissolved Solids	N	1020	mg/l	1.0	560
Turbidity	N	1060	NTU	1.0	44
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	25
Dissolved Oxygen	N	1150	mg O2/l	0.50	8.0
Redox Potential	N	1170	mV	N/A	56
Chloride	U	1220	mg/l	1.0	70
Fluoride	U	1220	mg/l	0.050	0.39
Ammoniacal Nitrogen	U	1220	mg/l	0.050	0.34
Phosphorus (Total)	N	1220	mg/l	0.020	0.021
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.021
Sulphur	N	1220	mg/l	1.0	22
Sulphate	U	1220	mg/l	1.0	67
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	[B] < 0.050
Calcium	U	1455	mg/l	2.00	35
Magnesium	U	1455	mg/l	0.20	8.1
Total Calcium	N	1455	mg/l	5.0	36
Total Magnesium	N	1455	mg/l	0.50	8.6
Total Hardness as CaCO3	U	1270	mg/l	15	120
Arsenic (Dissolved)	U	1455	µg/l	0.20	3.1
Boron (Dissolved)	U	1455	µg/l	10.0	120
Barium (Dissolved)	U	1455	µg/l	5.00	34
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	6.5
Copper (Dissolved)	U	1455	µg/l	0.50	2.3
Iron (Dissolved)	N	1455	µg/l	5.0	< 5.0
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	4.2
Nickel (Dissolved)	U	1455	µg/l	0.50	1.1
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	0.62
Vanadium (Dissolved)	U	1455	µg/l	0.50	7.6
Zinc (Dissolved)	U	1455	µg/l	2.5	4.9
Arsenic (Total)	N	1455	µg/l	0.20	3.1
Boron (Total)	N	1455	µg/l	10.0	120
Barium (Total)	N	1455	µg/l	5.00	35
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	6.8
Copper (Total)	N	1455	µg/l	0.50	2.3
Iron (Total)	N	1455	µg/l	5.0	< 5.0
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	4.5
Nickel (Total)	N	1455	µg/l	0.50	1.2
Lead (Total)	N	1455	µg/l	0.50	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	< 0.50
Selenium (Total)	N	1455	µg/l	0.50	0.62
Vanadium (Total)	N	1455	µg/l	0.50	7.7
Zinc (Total)	N	1455	µg/l	2.5	4.9
Chromium (Hexavalent)	U	1490	µg/l	20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	6.2
Total Inorganic Carbon	N	1220	mg/l	2.5	34
Total Organic Carbon	U	1610	mg/l	2.0	6.4
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		21-26393
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1251519
Order No.: .			Client Sample Ref.:		D2-S
			Sample Type:		WATER
			Date Sampled:		30-Jul-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1251519	D2-S			30-Jul-2021	B	Coloured Winchester 1000ml
1251519	D2-S			30-Jul-2021	B	EPA Vial 40ml
1251519	D2-S			30-Jul-2021	B	Plastic Bottle 1000ml

Test Methods

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

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-10648-1		
Initial Date of Issue:	25-Mar-2022		
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	22-Mar-2022
Order No.:	PO115623	**Date Instructed:**	22-Mar-2022
No. of Samples:	11		
Turnaround (Wkdays):	5	**Results Due:**	28-Mar-2022
Date Approved:	25-Mar-2022		
Approved By:			



Details:	Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1395704	1395705	1395706	1395707	1395708	1395709	1395710	1395711	1395712
		Client Sample ID.:			AG33-1	AG34-1	AG35-1	R-CSP-7	R-CSP-8	R-4hNB-1	Avenue Road - 8	Avenue Road - 9	Avenue Road - 10
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Bottom Depth (m):			0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
		Date Sampled:			18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022
		Asbestos Lab:			NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-		-	-		-		-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected	
Moisture	N	2030	%	0.020	13	12	8.6	12	11	13	13	11	6.6
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.2	8.2	8.6	8.8	9.4	9.2	9.5	9.6	9.2
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	2.1	1.3	1.5	2.0	1.5	0.70
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	15	39	26	2.6	8.6	0.86	1.5	3.7	5.1
Iron (Total)	N	2430	mg/kg	100	21000	8000	16000	24000	23000	19000	24000	21000	27000
Arsenic	M	2450	mg/kg	1.0	10	5.4	9.0	13	12	15	15	13	13
Cadmium	M	2450	mg/kg	0.10	0.31	< 0.10	0.18	0.78	0.44	0.30	0.86	0.44	0.33
Chromium	M	2450	mg/kg	1.0	92	16	27	120	40	57	77	40	44
Manganese	M	2450	mg/kg	5.0	5300	550	1200	6500	2100	4100	4500	2500	3700
Copper	M	2450	mg/kg	0.50	16	35	30	25	28	14	31	22	25
Mercury	M	2450	mg/kg	0.10	0.14	< 0.10	< 0.10	0.73	0.29	0.13	0.37	0.51	0.29
Nickel	M	2450	mg/kg	0.50	31	17	29	24	26	19	30	21	34
Lead	M	2450	mg/kg	0.50	33	36	32	120	200	29	110	88	75
Selenium	M	2450	mg/kg	0.20	0.29	0.49	0.67	0.49	0.67	0.71	0.41	0.30	< 0.20
Vanadium	U	2450	mg/kg	5.0	93	21	48	150	57	100	89	60	47
Zinc	M	2450	mg/kg	0.50	110	37	52	360	170	93	330	200	120
Organic Matter	M	2625	%	0.40	6.6	29	17	9.8	36	6.0	7.1	12	11
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	9.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	220	67	< 1.0	< 1.0	58	77
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	230	67	< 5.0	< 5.0	58	77
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental					**Chemtest Job No.:**	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648	22-10648
Quotation No.: Q21-24056					**Chemtest Sample ID.:**	1395704	1395705	1395706	1395707	1395708	1395709	1395710	1395711	1395712
					Client Sample ID.:	AG33-1	AG34-1	AG35-1	R-CSP-7	R-CSP-8	R-4hNB-1	Avenue Road - 8	Avenue Road - 9	Avenue Road - 10
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
					Bottom Depth (m):	0.8	1.0	0.9	0.2	0.2	0.2	0.2	0.2	0.2
					Date Sampled:	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022	18-Mar-2022
					Asbestos Lab:	NEW-ASB		NEW-ASB	NEW-ASB		NEW-ASB		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	15	4.8	< 1.0	< 1.0	9.5	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	140	88	< 1.0	< 1.0	100	38
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0		< 5.0	< 5.0	< 5.0	150	93	< 5.0	< 5.0	110	38
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0		< 10	< 10	< 10	380	160	< 10	< 10	170	120
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	1.6	1.9	< 0.10	1.7	1.4	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	0.69	0.25	< 0.10	0.82	0.50	< 0.10
Acenaphthene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	0.21	0.15	< 0.10	0.33	0.23	< 0.10
Fluorene	M	2800	mg/kg	0.10		< 0.10	< 0.10	< 0.10	0.77	0.39	< 0.10	0.76	0.52	< 0.10
Phenanthrene	M	2800	mg/kg	0.10		0.97	< 0.10	1.3	6.2	2.4	0.27	5.5	5.1	0.66
Anthracene	M	2800	mg/kg	0.10		0.46	< 0.10	0.28	1.9	0.51	< 0.10	1.2	1.3	0.15
Fluoranthene	M	2800	mg/kg	0.10		2.7	0.83	1.8	10	2.5	0.52	10	8.5	0.85
Pyrene	M	2800	mg/kg	0.10		1.8	0.70	1.2	7.5	1.8	0.49	7.5	6.3	0.73
Benzo[a]anthracene	M	2800	mg/kg	0.10		1.8	0.35	1.1	4.4	1.1	0.33	4.8	4.4	0.54
Chrysene	M	2800	mg/kg	0.10		1.7	0.36	0.89	4.6	1.4	0.35	4.8	4.5	0.47
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		2.2	0.64	1.1	6.0	1.7	0.32	7.0	7.2	0.94
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		0.71	0.28	0.43	2.2	0.46	0.13	2.4	2.2	0.28
Benzo[a]pyrene	M	2800	mg/kg	0.10		1.5	0.45	0.88	4.2	1.1	0.41	4.8	5.2	0.62
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		1.0	0.36	0.60	3.2	0.72	0.40	4.0	4.5	0.60
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.21	0.11	0.18	0.66	0.21	< 0.10	0.76	0.78	0.11
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		0.93	0.32	0.52	3.4	0.87	0.32	3.6	4.7	0.56
Total Of 16 PAH's	N	2800	mg/kg	2.0		16	4.4	10	58	18	3.5	60	57	6.5
Resorcinol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020		< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-10648	22-10648
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1395713	1395714
		Client Sample ID.:			Avenue Road - 11	Avenue Road - 12
		Sample Type:			SOIL	SOIL
		Top Depth (m):			0.2	0.2
		Bottom Depth (m):			0.2	0.2
		Date Sampled:			18-Mar-2022	18-Mar-2022
		Asbestos Lab:			NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
ACM Type	U	2192		N/A	-	
Asbestos Identification	U	2192		N/A	No Asbestos Detected	
Moisture	N	2030	%	0.020	7.5	12
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand
pH	M	2010		4.0	9.3	9.9
Cyanide (Total)	M	2300	mg/kg	0.50	2.1	2.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	16	1.9
Iron (Total)	N	2430	mg/kg	100	23000	22000
Arsenic	M	2450	mg/kg	1.0	12	6.9
Cadmium	M	2450	mg/kg	0.10	0.26	0.61
Chromium	M	2450	mg/kg	1.0	31	110
Manganese	M	2450	mg/kg	5.0	2000	5200
Copper	M	2450	mg/kg	0.50	21	15
Mercury	M	2450	mg/kg	0.10	0.19	0.16
Nickel	M	2450	mg/kg	0.50	22	16
Lead	M	2450	mg/kg	0.50	53	83
Selenium	M	2450	mg/kg	0.20	0.40	0.37
Vanadium	U	2450	mg/kg	5.0	48	140
Zinc	M	2450	mg/kg	0.50	120	350
Organic Matter	M	2625	%	0.40	9.7	21
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	7.3
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	26
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	220
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	250
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	10

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-10648	22-10648
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1395713	1395714
			Client Sample ID.:		Avenue Road - 11	Avenue Road - 12
			Sample Type:		SOIL	SOIL
			Top Depth (m):		0.2	0.2
			Bottom Depth (m):		0.2	0.2
			Date Sampled:		18-Mar-2022	18-Mar-2022
			Asbestos Lab:		NEW-ASB	
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	28
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	240
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	280
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	520
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.91	21
Anthracene	M	2800	mg/kg	0.10	0.23	6.2
Fluoranthene	M	2800	mg/kg	0.10	1.6	28
Pyrene	M	2800	mg/kg	0.10	1.3	20
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.79	12
Chrysene	M	2800	mg/kg	0.10	0.76	13
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	1.3	16
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.39	5.2
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.98	11
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.77	9.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	1.7
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.68	7.3
Total Of 16 PAH's	N	2800	mg/kg	2.0	9.8	150
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-16610-1
Initial Date of Issue:	11-May-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	9
Turnaround (Wkdays):	5
Date Approved:	11-May-2022
Approved By:	

Date Received:	06-May-2022
Date Instructed:	06-May-2022
Results Due:	12-May-2022



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
ACM Type	U	2192		N/A	-		-	-		-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	5.4	6.1	9.9	11	9.6	6.1	8.9	6.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Roots and Stones	Stones and Roots	Roots and Stones	Stones and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.2	8.9	8.7	8.8	8.8	8.6	8.6	8.6
Cyanide (Total)	M	2300	mg/kg	0.50	5.7	3.8	0.70	< 0.50	0.50	< 0.50	< 0.50	0.50
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	5.4	5.0	9.3	4.3	4.5	7.2	7.8	66
Iron (Total)	N	2430	mg/kg	100	33000	53000	37000	39000	32000	44000	27000	28000
Arsenic	M	2455	mg/kg	0.5	6.7	14	31	7.2	4.8	7.5	12	6.0
Cadmium	M	2455	mg/kg	0.10	0.45	1.4	0.61	0.91	0.52	0.47	0.26	0.18
Chromium	M	2455	mg/kg	0.5	26	55	51	100	49	97	22	19
Manganese	M	2455	mg/kg	1.0	2300	3300	6400	4900	2400	4800	920	1000
Copper	M	2455	mg/kg	0.50	15	19	27	23	15	20	17	11
Mercury	M	2455	mg/kg	0.05	0.32	0.46	0.28	0.32	0.23	0.25	0.21	0.20
Nickel	M	2455	mg/kg	0.50	13	19	25	17	11	19	12	12
Lead	M	2455	mg/kg	0.50	52	320	57	190	72	68	26	33
Selenium	M	2455	mg/kg	0.25	2.1	2.0	1.4	1.5	1.2	1.6	1.4	1.2
Vanadium	U	2455	mg/kg	0.5	44	110	80	160	88	120	28	25
Zinc	M	2455	mg/kg	0.50	140	630	150	500	220	170	48	62
Organic Matter	M	2625	%	0.40	7.9	21	24	13	31	28	38	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	7.3	< 1.0	< 1.0	11	10	10	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	53	< 1.0	< 1.0	230	140	60	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	60	< 5.0	< 5.0	240	150	71	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	17	< 1.0	< 1.0	< 1.0	5.9	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610	22-16610
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1422839	1422840	1422841	1422842	1422843	1422844	1422845	1422846
		Client Sample ID.:			R161-1	R161-2	R162-1	R147-1	R147-2	R146-1	R148-1	R148-2
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**								
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	39	< 1.0	< 1.0	< 1.0	66	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	55	< 5.0	< 5.0	< 5.0	72	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	60	55	< 10	240	150	140	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	6.5	17	12	4.6	9.6	11	8.4	5.5
Acenaphthylene	N	2800	mg/kg	0.10	0.51	3.0	0.72	0.31	1.0	1.7	0.32	0.95
Acenaphthene	M	2800	mg/kg	0.10	0.20	0.47	0.22	0.15	0.27	0.35	0.24	0.18
Fluorene	M	2800	mg/kg	0.10	0.52	2.1	0.53	0.15	0.78	1.2	0.28	0.13
Phenanthrene	M	2800	mg/kg	0.10	3.9	14	3.3	1.2	6.5	10	1.8	0.89
Anthracene	M	2800	mg/kg	0.10	0.71	3.5	0.97	0.28	2.1	3.3	0.41	0.37
Fluoranthene	M	2800	mg/kg	0.10	4.8	25	6.6	2.4	15	24	2.4	4.3
Pyrene	M	2800	mg/kg	0.10	3.5	18	4.8	2.0	11	16	1.8	3.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.1	11	3.6	1.4	6.6	13	1.2	2.9
Chrysene	M	2800	mg/kg	0.10	2.6	10	3.2	1.4	6.6	13	0.96	2.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.1	14	5.8	2.8	9.5	19	1.9	6.6
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.2	4.6	2.0	0.70	3.4	6.3	0.63	1.9
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.3	12	4.4	2.1	7.8	14	1.2	5.1
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.1	8.7	3.9	2.2	6.6	13	1.4	5.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.34	1.1	0.50	0.27	0.88	2.2	0.24	0.79
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.7	5.9	2.9	1.4	4.6	8.3	0.97	4.0
Total Of 16 PAH's	N	2800	mg/kg	2.0	36	150	55	23	92	160	24	45
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	0.063	< 0.020	< 0.020	< 0.020	0.24	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	U	1010		N/A	8.3
Electrical Conductivity	U	1020	µS/cm	1.0	800
Suspended Solids At 105C	U	1030	mg/l	5.0	180
Total Dissolved Solids	N	1020	mg/l	1.0	520
Turbidity	N	1060	NTU	1.0	260
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	< 4.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	22
Dissolved Oxygen	N	1150	mg O2/l	0.50	3.4
Redox Potential	N	1170	mV	N/A	150
Chloride	U	1220	mg/l	1.0	66
Fluoride	U	1220	mg/l	0.050	0.54
Ammoniacal Nitrogen	U	1220	mg/l	0.050	2.6
Phosphorus (Total)	N	1220	mg/l	0.020	0.040
Phosphate	U	1220	mg/l	0.200	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.039
Sulphur	N	1220	mg/l	1.0	43
Sulphate	U	1220	mg/l	1.0	130
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050
Calcium	U	1455	mg/l	2.00	64
Magnesium	U	1455	mg/l	0.20	13
Total Calcium	N	1455	mg/l	5.0	64
Total Magnesium	N	1455	mg/l	0.50	13
Total Hardness as CaCO3	U	1270	mg/l	15	210
Arsenic (Dissolved)	U	1455	µg/l	0.20	2.6
Boron (Dissolved)	U	1455	µg/l	10.0	130
Barium (Dissolved)	U	1455	µg/l	5.00	68
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	1.2
Copper (Dissolved)	U	1455	µg/l	0.50	1.6
Iron (Dissolved)	N	1455	µg/l	5.0	35
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	420
Nickel (Dissolved)	U	1455	µg/l	0.50	1.9
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.55

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Selenium (Dissolved)	U	1455	µg/l	0.50	< 0.50
Vanadium (Dissolved)	U	1455	µg/l	0.50	6.8
Zinc (Dissolved)	U	1455	µg/l	2.5	2.9
Arsenic (Total)	N	1455	µg/l	0.20	3.3
Boron (Total)	N	1455	µg/l	10.0	210
Barium (Total)	N	1455	µg/l	5.00	72
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	0.21
Chromium (Total)	N	1455	µg/l	0.50	1.5
Copper (Total)	N	1455	µg/l	0.50	4.2
Iron (Total)	N	1455	µg/l	5.0	590
Mercury (Total)	N	1455	µg/l	0.05	< 0.05
Manganese (Total)	N	1455	µg/l	0.50	440
Nickel (Total)	N	1455	µg/l	0.50	3.4
Lead (Total)	N	1455	µg/l	0.50	7.9
Antimony (Total)	N	1455	µg/l	0.50	0.77
Selenium (Total)	N	1455	µg/l	0.50	0.88
Vanadium (Total)	N	1455	µg/l	0.50	8.8
Zinc (Total)	N	1455	µg/l	2.5	40
Chromium (Hexavalent)	U	1490	µg/l	20	89
Dissolved Organic Carbon	U	1610	mg/l	2.0	8.0
Total Inorganic Carbon	N	1220	mg/l	2.5	38
Total Organic Carbon	U	1610	mg/l	2.0	8.7
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	130
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	130
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	130
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-16610
Quotation No.: Q21-24056			**Chemtest Sample ID.:**		1422847
			Client Sample ID.:		DS2
			Sample Type:		WATER
			Date Sampled:		05-May-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030

Test Methods

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Amended Report

Report No.:	22-16661-2		
Initial Date of Issue:	13-May-2022	**Date of Re-Issue:**	19-May-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	06-May-2022
Order No.:	PO115623	**Date Instructed:**	06-May-2022
No. of Samples:	7		
Turnaround (Wkdays):	12	**Results Due:**	23-May-2022
Date Approved:	19-May-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16661	22-16661	22-16661	22-16661	22-16661	22-16661	22-16661
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1423051	1423052	1423053	1423054	1423055	1423056	1423057
Order No.: PO115623		Client Sample Ref.:			R152-1	R152-2	R158-1	R158-2	R159-1	R159-2	R160-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
ACM Type	U	2192		N/A	-		-		-		Fibres/Clumps
Asbestos Identification	U	2192		N/A	No Asbestos Detected		No Asbestos Detected		No Asbestos Detected		Chrysotile
Asbestos by Gravimetry	U	2192	%	0.001							0.006
Total Asbestos	U	2192	%	0.001							0.006
Moisture	N	2030	%	0.020	5.0	8.9	8.0	10	6.0	6.9	7.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	10.0	10.2	8.8	8.6	8.5	8.8	9.5
Cyanide (Total)	M	2300	mg/kg	0.50	5.6	3.5	0.50	< 0.50	< 0.50	< 0.50	0.90
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	3.0	13	0.52	1.3	2.3	3.9	2.6
Iron (Total)	N	2430	mg/kg	100	34000	36000	60000	60000	57000	45000	46000
Arsenic	M	2455	mg/kg	0.5	3.1	3.8	28	21	21	12	7.7
Cadmium	M	2455	mg/kg	0.10	0.15	0.17	0.16	0.11	0.15	0.51	1.1
Chromium	M	2455	mg/kg	0.5	180	120	17	19	12	100	63
Manganese	M	2455	mg/kg	1.0	13000	7600	16000	10000	7000	5500	5300
Copper	M	2455	mg/kg	0.50	12	12	81	67	70	27	19
Mercury	M	2455	mg/kg	0.05	0.05	< 0.05	7.3	4.0	4.5	0.32	0.19
Nickel	M	2455	mg/kg	0.50	11	14	6.3	6.6	7.1	25	16
Lead	M	2455	mg/kg	0.50	12	21	110	78	58	58	240
Selenium	M	2455	mg/kg	0.25	0.86	1.5	0.70	0.59	1.3	2.3	2.3
Vanadium	U	2455	mg/kg	0.5	200	120	21	21	19	76	91
Zinc	M	2455	mg/kg	0.50	52	68	88	68	64	170	460
Organic Matter	M	2625	%	0.40	4.1	5.5	0.86	1.2	1.5	9.0	10
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	200	180
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	200	180
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-16661	22-16661	22-16661	22-16661	22-16661	22-16661	22-16661
Quotation No.: Q21-24056		**Chemtest Sample ID.:**			1423051	1423052	1423053	1423054	1423055	1423056	1423057
Order No.: PO115623		Client Sample Ref.:			R152-1	R152-2	R158-1	R158-2	R159-1	R159-2	R160-1
		Sample Type:			SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Date Sampled:			04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022	04-May-2022
		Asbestos Lab:			COVENTRY		COVENTRY		COVENTRY		COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**							
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	50	22	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	290	52	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	340	74	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	340	74	< 10	< 10	< 10	200	180
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	160	240	74
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	22	6.2	11
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	33	6.1	1.7
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	36	5.7	3.9
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.2	3.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	2.5	< 0.10	< 0.10	< 0.10	< 0.10	4.8	5.6
Acenaphthylene	N	2800	mg/kg	0.10	4.2	< 0.10	< 0.10	< 0.10	< 0.10	0.67	1.5
Acenaphthene	M	2800	mg/kg	0.10	0.36	< 0.10	< 0.10	< 0.10	< 0.10	0.18	0.49
Fluorene	M	2800	mg/kg	0.10	2.3	< 0.10	< 0.10	< 0.10	< 0.10	0.84	1.7
Phenanthrene	M	2800	mg/kg	0.10	26	0.26	0.31	0.37	0.29	4.7	12
Anthracene	M	2800	mg/kg	0.10	6.3	< 0.10	0.12	0.11	0.13	1.3	2.5
Fluoranthene	M	2800	mg/kg	0.10	44	0.34	0.39	0.59	0.32	8.4	20
Pyrene	M	2800	mg/kg	0.10	31	0.27	0.33	0.47	0.26	6.0	15
Benzo[a]anthracene	M	2800	mg/kg	0.10	16	0.15	0.21	0.24	< 0.10	4.1	8.8
Chrysene	M	2800	mg/kg	0.10	18	0.17	0.26	0.21	< 0.10	4.0	8.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	21	< 0.10	0.43	0.41	< 0.10	6.1	13
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	7.8	< 0.10	0.14	0.14	< 0.10	1.8	4.3
Benzo[a]pyrene	M	2800	mg/kg	0.10	15	< 0.10	0.27	0.30	< 0.10	4.2	9.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	10	< 0.10	0.35	< 0.10	< 0.10	3.1	6.7
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	2.1	< 0.10	0.13	< 0.10	< 0.10	0.62	1.4
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	9.6	< 0.10	0.24	< 0.10	< 0.10	2.8	5.7
Total Of 16 PAH's	N	2800	mg/kg	2.0	220	< 2.0	3.2	2.8	< 2.0	54	120
Resorcinol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Phenol	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Cresols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Xylenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
1-Naphthol	N	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Trimethylphenols	M	2920	mg/kg	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	22-23919-1
Initial Date of Issue:	01-Jul-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q21-24056
Order No.:	PO115623
No. of Samples:	4
Turnaround (Wkdays):	5
Date Approved:	01-Jul-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	27-Jun-2022
Date Instructed:	27-Jun-2022
Results Due:	01-Jul-2022

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

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For all other tests the samples were dried at < 37°C prior to analysis
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Sample Deviation Codes

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

Sample Retention and Disposal

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

Final Report

Report No.:	22-24434-1		
Initial Date of Issue:	05-Jul-2022		
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q21-24056	**Date Received:**	29-Jun-2022
Order No.:	PO115623	**Date Instructed:**	29-Jun-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	05-Jul-2022
Date Approved:	05-Jul-2022		

Approved By:



Details: Stuart Henderson, Technical Manager

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
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.:	22-34126-2		
Initial Date of Issue:	15-Sep-2022	**Date of Re-Issue:**	23-Sep-2022
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q22-28243	**Date Received:**	07-Sep-2022
Order No.:	115623	**Date Instructed:**	16-Sep-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	23-Sep-2022
Date Approved:	23-Sep-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
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SOP	Standard operating procedure
LOD	Limit of detection

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All results are expressed on a dry weight basis

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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Charges may apply to extended sample storage

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customerservices@chemtest.com

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

Final Report

Report No.:	22-35446-1		
Initial Date of Issue:	27-Sep-2022		
Client	Rodgers Leask Environmental		
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ		
Contact(s):	Caitlin Davies Chris Wilson David McCarroll		
Project	P18-669		
Quotation No.:	Q22-28243	**Date Received:**	16-Sep-2022
Order No.:	115623	**Date Instructed:**	16-Sep-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	23-Sep-2022
Date Approved:	27-Sep-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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

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

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

Report Information

Key

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>	"greater than"
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None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

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

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

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
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customerservices@chemtest.com

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

Final Report

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

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Results - Soil

Project: P18-669

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

Test Methods

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

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.:	22-37311-1
Initial Date of Issue:	18-Oct-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	115623
No. of Samples:	5
Turnaround (Wkdays):	5
Date Approved:	18-Oct-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37311	22-37311	22-37311	22-37311	22-37311
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515791	1515792	1515793	1515794	1515795
			Sample Location:		5E1-SV18	5E1-SV19	5E1-SV20	5E1-SV21	5E1-SV22
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-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	6.2	6.0	5.0	6.6	6.1
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones and Roots	Stones	Stones and Roots	Roots and Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	9.1	9.2	9.5	9.0	9.1
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.95		0.88		
Total Sulphur	M	2175	%	0.010	0.51		0.58		
Chloride (Water Soluble)	M	2220	g/l	0.010	0.027		0.037		
Nitrate (Water Soluble)	N	2220	g/l	0.010	0.030		0.014		
Cyanide (Total)	M	2300	mg/kg	0.50	1.6	2.1	5.1	1.4	1.1
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.1	1.6	0.55	14	0.93
Iron (Total)	N	2430	mg/kg	100	41000	52000	61000	30000	52000
Sulphate (Acid Soluble)	U	2430	%	0.010	0.37		0.30		
Arsenic	M	2455	mg/kg	0.5	6.2	8.6	9.0	7.9	7.1
Cadmium	M	2455	mg/kg	0.10	0.26	0.35	0.55	0.30	0.39
Chromium	M	2455	mg/kg	0.5	71	100	160	38	73
Manganese	M	2455	mg/kg	1.0	3900	5600	7200	1700	3600
Copper	M	2455	mg/kg	0.50	11	16	27	21	18
Mercury	M	2455	mg/kg	0.05	0.08	0.12	0.24	0.11	0.11
Nickel	M	2455	mg/kg	0.50	11	18	20	17	15
Lead	M	2455	mg/kg	0.50	27	45	77	36	61
Selenium	M	2455	mg/kg	0.25	0.96	1.5	1.6	1.1	1.5
Vanadium	U	2455	mg/kg	0.5	79	100	190	50	91
Zinc	M	2455	mg/kg	0.50	86	110	250	74	140
Organic Matter	M	2625	%	0.40	26	9.0	8.9	12	12
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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37311	22-37311	22-37311	22-37311	22-37311
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515791	1515792	1515793	1515794	1515795
			Sample Location:		5E1-SV18	5E1-SV19	5E1-SV20	5E1-SV21	5E1-SV22
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 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	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	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
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	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	12	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	4.8	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	1.5	2.6	0.84	< 0.10	3.1
Acenaphthylene	N	2800	mg/kg	0.10	0.38	0.56	0.34	< 0.10	0.65
Acenaphthene	M	2800	mg/kg	0.10	0.22	0.13	0.10	< 0.10	0.13
Fluorene	M	2800	mg/kg	0.10	0.40	0.34	0.34	< 0.10	0.37
Phenanthrene	M	2800	mg/kg	0.10	1.7	2.8	2.7	1.0	2.1
Anthracene	M	2800	mg/kg	0.10	0.64	0.79	0.49	0.29	0.87
Fluoranthene	M	2800	mg/kg	0.10	3.5	5.7	4.0	1.4	4.2
Pyrene	M	2800	mg/kg	0.10	2.9	4.2	2.9	1.1	3.7
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.2	3.1	1.7	0.87	3.0
Chrysene	M	2800	mg/kg	0.10	2.1	3.2	1.3	1.0	3.1
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.4	5.0	2.2	1.2	4.3
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.1	1.6	0.61	0.40	1.4
Benzo[a]pyrene	M	2800	mg/kg	0.10	2.4	3.8	1.6	0.94	3.4
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	1.8	3.1	< 0.10	0.80	2.5
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.25	0.54	< 0.10	0.20	0.50
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	1.5	2.6	< 0.10	0.68	2.2
Total Of 16 PAH's	N	2800	mg/kg	2.0	26	40	19	9.9	36
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

Results - Soil

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-37311	22-37311	22-37311	22-37311	22-37311
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1515791	1515792	1515793	1515794	1515795
			Sample Location:		5E1-SV18	5E1-SV19	5E1-SV20	5E1-SV21	5E1-SV22
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.20	0.20	0.20	0.20	0.20
			Date Sampled:		27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022	27-Sep-2022
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
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
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurememrnt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
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.
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

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:	12 March 2021
Customer:	Rodgers Leask
Sample Delivery Group (SDG):	210202-91
Your Reference:	P18-669
Location:	Llanwern
Report No:	590436

This report has been revised and directly supersedes 590434 in its entirety.

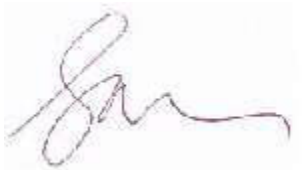
We received 23 samples on Tuesday February 02, 2021 and 23 of these samples were scheduled for analysis which was completed on Friday March 12, 2021. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

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

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

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Sonia McWhan

Operations Manager

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

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
23652632	AJ21-1		0.30 - 0.30	29/01/2021
23652638	AJ21-2		1.30 - 1.30	29/01/2021
23652642	AK21-1		0.50 - 0.50	29/01/2021
23652650	AK21-2		1.20 - 1.20	29/01/2021
23652548	AK22-1		0.50 - 0.50	29/01/2021
23652599	AK22-2		1.60 - 1.60	29/01/2021
23652657	AL21-1		0.50 - 0.50	29/01/2021
23652664	AL21-2		1.40 - 1.40	29/01/2021
23652671	P20-1		0.50 - 0.50	01/02/2021
23652552	P20-2		1.30 - 1.30	01/02/2021
23652557	P21-1		0.30 - 0.30	01/02/2021
23652561	P21-2		1.50 - 1.50	01/02/2021
23652565	Q20-1		0.60 - 0.60	01/02/2021
23652571	Q20-2		1.80 - 1.80	01/02/2021
23652577	Q21-1		0.30 - 0.30	01/02/2021
23652581	Q21-2		1.90 - 1.90	01/02/2021
23652618	Q22-1		0.30 - 0.30	01/02/2021
23652623	Q22-2		1.70 - 1.70	01/02/2021
23652585	R21-1		0.30 - 0.30	01/02/2021
23652589	R21-2		1.00 - 1.00	01/02/2021
23652594	R21-3		2.20 - 2.20	01/02/2021
23652609	R22-1		0.20 - 0.20	01/02/2021
23652613	R22-2		1.60 - 1.60	01/02/2021

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23652632		23652638		23652642		23652650		23652548		23652599		23652657		23652664				
Customer Sample Reference			AJ21-1		AJ21-2		AK21-1		AK21-2		AK22-1		AK22-2		AL21-1		AL21-2				
AGS Reference																					
Depth (m)			0.30 - 0.30		1.30 - 1.30		0.50 - 0.50		1.20 - 1.20		0.50 - 0.50		1.60 - 1.60		0.50 - 0.50		1.40 - 1.40				
Container			1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12	X					X					X					X			
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																X			
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
EPH CWG GC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X	
Metals in solid samples by OES	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
PAH by GCMS	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
pH	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Sample description	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
Total Organic Carbon	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
TPH CWG GC (S)	All	NDPs: 0 Tests: 23		X		X			X		X			X		X			X		X
VOC MS (S)	All	NDPs: 0 Tests: 23			X		X			X		X			X		X			X	

23652581	Q21-2		1.90 - 1.90	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23652577	Q21-1		0.30 - 0.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23652571	Q20-2		1.80 - 1.80	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23652565	Q20-1		0.60 - 0.60	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23652561	P21-2		1.50 - 1.50	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23652557	P21-1		0.30 - 0.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23652552	P20-2		1.30 - 1.30	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
23652671	P20-1		0.50 - 0.50	60g VOC (ALE215)	S								x												x
				250g Amber Jar (ALE210)	S	x				x	x		x	x	x	x	x	x	x	x					
				1kg TUB with Handle (ALE260)	S		x																		
23652664	AL21-2		1.40 - 1.40	60g VOC (ALE215)	S								x												x

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

X Test

N No Determination Possible

Sample Types -

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

Lab Sample No(s)			23652618		23652623		23652585		23652589		23652594		23652609		23652613					
Customer Sample Reference			Q22-1		Q22-2		R21-1		R21-2		R21-3		R22-1		R22-2					
AGS Reference																				
Depth (m)			0.30 - 0.30		1.70 - 1.70		0.30 - 0.30		1.00 - 1.00		2.20 - 2.20		0.20 - 0.20		1.60 - 1.60					
Container			250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
Sample Type			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammonium Soil by Titration	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 12			X			X					X					X		
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
EPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
GRO by GC-FID (S)	All	NDPs: 0 Tests: 23		X			X			X		X			X		X			X
Metals in solid samples by OES	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
PAH by GCMS	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
pH	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Phenols by HPLC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Sample description	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
Total Organic Carbon	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
TPH CWG GC (S)	All	NDPs: 0 Tests: 23	X			X			X		X			X		X			X	
VOC MS (S)	All	NDPs: 0 Tests: 23		X			X			X		X			X		X			X

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Sample Descriptions

Grain Sizes

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

Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
23652632	AJ21-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652638	AJ21-2	1.30 - 1.30	Light Brown	Sand	Stones	None
23652642	AK21-1	0.50 - 0.50	Dark Brown	Sandy Clay	Stones	None
23652650	AK21-2	1.20 - 1.20	Dark Brown	Loamy Sand	Stones	None
23652548	AK22-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652599	AK22-2	1.60 - 1.60	Dark Brown	Silty Sand	Stones	None
23652657	AL21-1	0.50 - 0.50	Dark Brown	Loamy Sand	Stones	None
23652664	AL21-2	1.40 - 1.40	Dark Brown	Sand	Stones	None
23652671	P20-1	0.50 - 0.50	Dark Brown	Sandy Silt Loam	Stones	None
23652552	P20-2	1.30 - 1.30	Dark Brown	Sandy Clay Loam	Stones	None
23652557	P21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652561	P21-2	1.50 - 1.50	Dark Brown	Loamy Sand	Stones	None
23652565	Q20-1	0.60 - 0.60	Dark Brown	Sandy Silt Loam	Stones	None
23652571	Q20-2	1.80 - 1.80	Dark Brown	Stone/Soil	Stones	None
23652577	Q21-1	0.30 - 0.30	Dark Brown	Sandy Silt Loam	Stones	None
23652581	Q21-2	1.90 - 1.90	Light Brown	Silty Sand	Stones	Vegetation
23652618	Q22-1	0.30 - 0.30	Dark Brown	Loamy Sand	Stones	None
23652623	Q22-2	1.70 - 1.70	Dark Brown	Loamy Sand	Stones	None
23652585	R21-1	0.30 - 0.30	Dark Brown	Sandy Loam	Stones	None
23652589	R21-2	1.00 - 1.00	Dark Brown	Sandy Loam	Stones	None
23652594	R21-3	2.20 - 2.20	Dark Brown	Silty Sand	Stones	None
23652609	R22-1	0.20 - 0.20	Dark Brown	Sandy Silt Loam	Stones	None
23652613	R22-2	1.60 - 1.60	Dark Brown	Sandy Loam	Stones	None

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

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

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

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		6.7	9.4	14	13	12	15
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		5.07 #	2.09 #	2.09 #	11.1 #	37.4 #	11.3 #
pH	1 pH Units	TM133		10.2 M	9.22 M	8.84 M	10.3 M	11.3 M	11.6 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	4.21 M	5.06 M	1.73 M
Arsenic	<0.6 mg/kg	TM181		<6 M	61.5 M	11.8 M	<6 M	12.2 M	7.92 M
Cadmium	<0.02 mg/kg	TM181		0.394 M	1.72 M	0.353 M	0.439 M	1.04 M	0.52 M
Chromium	<0.9 mg/kg	TM181		132 M	11.6 M	14.4 M	31 M	<9 M	37.2 M
Copper	<1.4 mg/kg	TM181		15.9 M	11 M	16.7 M	<14 M	20.7 M	19.6 M
Iron	<1000 mg/kg	TM181		98000 #	15600 #	30300 #	43300 #	220000 #	76400 #
Lead	<0.7 mg/kg	TM181		43.1 M	80.1 M	32.4 M	76.3 M	382 M	127 M
Manganese	<0.13 mg/kg	TM181		8510 M	2030 M	1050 M	5120 M	4060 M	2940 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 M	<0.1 M	<1 M	5.69 M	<1 M
Nickel	<0.2 mg/kg	TM181		23 M	8.83 M	24.3 M	10.8 M	36.9 M	24.8 M
Selenium	<1 mg/kg	TM181		<10 #	1.71 #	<1 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		70.4 #	34 #	26.4 #	38.5 #	280 #	62.9 #
Zinc	<1.9 mg/kg	TM181		131 M	573 M	117 M	237 M	641 M	236 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		20	11	9.8	23	13	9.8
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	51.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0258 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0111 M	0.0129 M	0.0114 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		12 #	5.26 #	10.9 #	8.46 #	13.8 #	2.1 #
pH	1 pH Units	TM133		8.81 M	9.39 M	11.8 M	11.3 M	11.3 M	11.2 M
Cyanide, Total	<1 mg/kg	TM153		3.41 M	2.09 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		10.2 M	<6 M	6.61 M	16 M	9.58 M	7.79 M
Cadmium	<0.02 mg/kg	TM181		1.89 M	<0.2 M	0.716 M	0.537 M	0.864 M	0.356 M
Chromium	<0.9 mg/kg	TM181		238 M	12 M	131 M	56.8 M	67.7 M	456 M
Copper	<1.4 mg/kg	TM181		26.3 M	17.8 M	<14 M	21.9 M	17 M	27.5 M
Iron	<1000 mg/kg	TM181		109000 #	18500 #	194000 #	116000 #	176000 #	176000 #
Lead	<0.7 mg/kg	TM181		167 M	27 M	47.9 M	44.2 M	63.2 M	34.9 M
Manganese	<0.13 mg/kg	TM181		16900 M	1060 M	7940 M	4390 M	6860 M	19500 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.7 M	19.6 M	22.4 M	34.2 M	27.8 M	15.1 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		208 #	25.6 #	154 #	106 #	121 #	408 #
Zinc	<1.9 mg/kg	TM181		546 M	75.6 M	168 M	131 M	191 M	107 M
Asbestos Quantification - Gravimetric - %	<0.001 %	TM304		0.0203 #					
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001 #					
Additional Asbestos Components (Using TM048)		TM304		None #					
Analysts Comments		TM304		ACM debris in soil					
Asbestos Quantification - Total - %	<0.001 %	TM304		0.0203 #					

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Moisture Content Ratio (% of as received sample)	%	PM024		8.9	17	9.1	15	13	11
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	43.9 #	<12 M	27.8 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		0.0549 M	<0.01 #	0.011 M	<0.01 M	0.023 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 #	<0.01 M	<0.01 M	0.023 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 #	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		0.0549 M	<0.035 #	<0.035 M	<0.035 M	0.046 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		4.1 #	12.2 #	19.7 #	3.05 #	4.69 #	1.07 #
pH	1 pH Units	TM133		11.2 M	9.61 #	10.3 M	8.62 M	12.1 M	10.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 #	<1 M	<1 M	1.96 M	<1 M
Arsenic	<0.6 mg/kg	TM181		8.13 M	9.02 #	7.96 M	6.39 M	18.6 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.03 M	0.139 #	0.882 M	0.306 M	2.86 M	0.427 M
Chromium	<0.9 mg/kg	TM181		81.9 M	5.19 #	62 M	20.1 M	411 M	125 M
Copper	<1.4 mg/kg	TM181		21.3 M	23 #	19.4 M	<14 M	41.7 M	<14 M
Iron	<1000 mg/kg	TM181		75700 #	20500 #	148000 #	37600 #	190000 #	80400 #
Lead	<0.7 mg/kg	TM181		109 M	20.2 #	80.6 M	22.1 M	369 M	21.4 M
Manganese	<0.13 mg/kg	TM181		7190 M	402 #	7410 M	2970 M	24500 M	8590 M
Mercury	<0.1 mg/kg	TM181		<1 M	<0.1 #	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		18.9 M	26.9 #	23.8 M	20.9 M	31.1 M	7.4 M
Selenium	<1 mg/kg	TM181		<10 #	<1 #	<10 #	<10 #	10.5 #	<10 #
Vanadium	<0.2 mg/kg	TM181		98.3 #	18.6 #	125 #	43.6 #	414 #	244 #
Zinc	<1.9 mg/kg	TM181		467 M	50.1 #	222 M	81.3 M	1260 M	59.7 M

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Moisture Content Ratio (% of as received sample)	%	PM024		8.8	12	11	11	13
Exchangeable Ammonia as N	<12 mg/kg	TM024		<12 M	<12 M	<12 M	<12 M	<12 M
Phenol	<0.01 mg/kg	TM062 (S)		<0.01 M	0.0114 M	<0.01 M	<0.01 M	<0.01 M
Cresols	<0.01 mg/kg	TM062 (S)		<0.01 M	<0.01 M	0.0112 M	0.0112 M	<0.01 M
Xylenols	<0.015 mg/kg	TM062 (S)		<0.015 M	<0.015 M	<0.015 M	<0.015 M	<0.015 M
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)		<0.035 M	<0.035 M	<0.035 M	<0.035 M	<0.035 M
Soil Organic Matter (SOM)	<0.35 %	TM132		6.15 #	8.79 #	6.5 #	3.34 #	7.43 #
pH	1 pH Units	TM133		11.7 M	11.4 M	11 M	12.1 M	11.9 M
Cyanide, Total	<1 mg/kg	TM153		<1 M	<1 M	<1 M	<1 M	<1 M
Arsenic	<0.6 mg/kg	TM181		17.8 M	9.45 M	6.58 M	9.05 M	<6 M
Cadmium	<0.02 mg/kg	TM181		2.04 M	0.673 M	2.4 M	0.735 M	1.95 M
Chromium	<0.9 mg/kg	TM181		155 M	115 M	451 M	237 M	184 M
Copper	<1.4 mg/kg	TM181		21.3 M	19.8 M	16.4 M	47.9 M	<14 M
Iron	<1000 mg/kg	TM181		183000 #	101000 #	174000 #	117000 #	160000 #
Lead	<0.7 mg/kg	TM181		35.6 M	68.4 M	57.8 M	102 M	11.1 M
Manganese	<0.13 mg/kg	TM181		13900 M	9310 M	26200 M	12300 M	10000 M
Mercury	<0.1 mg/kg	TM181		<1 M	<1 M	<1 M	<1 M	<1 M
Nickel	<0.2 mg/kg	TM181		20.5 M	21 M	14.7 M	25.3 M	12.8 M
Selenium	<1 mg/kg	TM181		<10 #	<10 #	<10 #	<10 #	<10 #
Vanadium	<0.2 mg/kg	TM181		184 #	162 #	337 #	220 #	209 #
Zinc	<1.9 mg/kg	TM181		153 M	220 M	231 M	373 M	76.4 M

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		78.6	78.3	79.7	75	81.1	80.8
Acenaphthene-d10 % recovery**	%	TM218		80.4	81.9	80.5	79	82.9	80.8
Phenanthrene-d10 % recovery**	%	TM218		85	86.4	84.3	77.5	86.2	85.7
Chrysene-d12 % recovery**	%	TM218		86	95.4	91.7	74	85.8	87.7
Perylene-d12 % recovery**	%	TM218		79.2	89.5	90.9	73.5	74.4	79.4
Naphthalene	<9 µg/kg	TM218		217 M	11 M	<9 M	<450 M	232 M	329 M
Acenaphthylene	<12 µg/kg	TM218		<240 M	<12 M	<12 M	<600 M	85 M	75.6 M
Acenaphthene	<8 µg/kg	TM218		<160 M	67.9 M	<8 M	<400 M	22.9 M	17.5 M
Fluorene	<10 µg/kg	TM218		<200 M	82.4 M	<10 M	<500 M	62.2 M	58.8 M
Phenanthrene	<15 µg/kg	TM218		540 M	1450 M	54.5 M	4160 M	557 M	407 M
Anthracene	<16 µg/kg	TM218		<320 M	286 M	19.9 M	<800 M	148 M	112 M
Fluoranthene	<17 µg/kg	TM218		1120 M	1720 M	142 M	4720 M	1200 M	596 M
Pyrene	<15 µg/kg	TM218		864 M	1240 M	119 M	3890 M	969 M	468 M
Benz(a)anthracene	<14 µg/kg	TM218		577 M	601 M	85.4 M	1710 M	669 M	320 M
Chrysene	<10 µg/kg	TM218		456 M	495 M	88 M	2280 M	709 M	359 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		859 M	455 M	110 M	2540 M	977 M	474 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		<280 M	160 M	33.6 M	<700 M	300 M	136 M
Benzo(a)pyrene	<15 µg/kg	TM218		480 M	259 M	67.3 M	1220 M	568 M	282 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		407 M	137 M	42.2 M	1310 M	434 M	229 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<460 M	36 M	<23 M	<1150 M	103 M	51.1 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		<480 M	126 M	40.3 M	<1200 M	399 M	211 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		5520	7130	801	21800	7430	4130

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		81.6	79.4	77.7	77.7	72.3	79.5
Acenaphthene-d10 % recovery**	%	TM218		79.4	77.9	81.3	80.5	77.9	81.7
Phenanthrene-d10 % recovery**	%	TM218		80.9	80.1	87.4	81	79.1	82.5
Chrysene-d12 % recovery**	%	TM218		77.2	75.5	92.4	78.8	85.5	85.8
Perylene-d12 % recovery**	%	TM218		74.3	72.6	82.8	70.2	76.4	81.2
Naphthalene	<9 µg/kg	TM218		87.2 M	85.9 M	722 M	249 M	1130 M	69.5 M
Acenaphthylene	<12 µg/kg	TM218		37.3 M	24.1 M	274 M	75.8 M	1710 M	21.8 M
Acenaphthene	<8 µg/kg	TM218		16.1 M	<8 M	<8 M	<8 M	<40 M	<8 M
Fluorene	<10 µg/kg	TM218		27 M	14.1 M	199 M	47 M	1980 M	15.1 M
Phenanthrene	<15 µg/kg	TM218		366 M	171 M	2070 M	516 M	12900 M	166 M
Anthracene	<16 µg/kg	TM218		88.5 M	39.9 M	524 M	143 M	3240 M	37.9 M
Fluoranthene	<17 µg/kg	TM218		672 M	264 M	2920 M	733 M	15400 M	235 M
Pyrene	<15 µg/kg	TM218		550 M	215 M	2140 M	567 M	10900 M	172 M
Benz(a)anthracene	<14 µg/kg	TM218		361 M	143 M	1190 M	320 M	5830 M	98 M
Chrysene	<10 µg/kg	TM218		391 M	156 M	1150 M	336 M	5380 M	104 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		591 M	235 M	1580 M	404 M	6680 M	119 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		208 M	70.9 M	464 M	123 M	2250 M	36.3 M
Benzo(a)pyrene	<15 µg/kg	TM218		371 M	138 M	904 M	227 M	4210 M	69.2 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		350 M	143 M	672 M	163 M	2960 M	51.6 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		70 M	26.5 M	150 M	37.8 M	655 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		318 M	132 M	627 M	157 M	2720 M	48.3 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4500	1860	15600	4100	78000	1240

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Naphthalene-d8 % recovery**	%	TM218		82.3	82.2	79.7	81.8	79.9	81.2
Acenaphthene-d10 % recovery**	%	TM218		84.6	79.9	81.4	83.4	78.7	79.8
Phenanthrene-d10 % recovery**	%	TM218		84.3	81.5	86	85.2	80.7	81.5
Chrysene-d12 % recovery**	%	TM218		88	73.8	90	89.9	74.3	76.7
Perylene-d12 % recovery**	%	TM218		79.6	70	82.9	85.1	70.1	72.7
Naphthalene	<9 µg/kg	TM218		283 M	80.4 #	475 M	39.1 M	72 M	87.2 M
Acenaphthylene	<12 µg/kg	TM218		<120 M	<12 #	371 M	<12 M	22.8 M	39.8 M
Acenaphthene	<8 µg/kg	TM218		<80 M	<8 #	<8 M	<8 M	27.5 M	9.59 M
Fluorene	<10 µg/kg	TM218		116 M	<10 #	225 M	<10 M	23.3 M	32.5 M
Phenanthrene	<15 µg/kg	TM218		864 M	166 #	2030 M	100 M	295 M	253 M
Anthracene	<16 µg/kg	TM218		233 M	<16 #	547 M	<16 M	65.3 M	61.2 M
Fluoranthene	<17 µg/kg	TM218		1450 M	48.6 #	4190 M	89.7 M	506 M	362 M
Pyrene	<15 µg/kg	TM218		1150 M	35 #	3200 M	67.6 M	438 M	279 M
Benz(a)anthracene	<14 µg/kg	TM218		763 M	20.4 #	2100 M	52 M	257 M	161 M
Chrysene	<10 µg/kg	TM218		866 M	35.5 #	2010 M	76.5 M	323 M	169 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		1190 M	33.6 #	3070 M	77.3 M	459 M	226 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		340 M	<14 #	945 M	22.2 M	142 M	74.4 M
Benzo(a)pyrene	<15 µg/kg	TM218		725 M	<15 #	1930 M	45.2 M	239 M	132 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		559 M	<18 #	1540 M	38.3 M	242 M	118 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		<230 M	<23 #	354 M	<23 M	49.1 M	<23 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		549 M	<24 #	1480 M	40.2 M	223 M	110 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		9080	420	24500	648	3390	2120

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

PAH by GCMS

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Naphthalene-d8 % recovery**	%	TM218		80.1	78.6	80.5	87.8	78.5
Acenaphthene-d10 % recovery**	%	TM218		79.9	82.6	82.5	86	81.6
Phenanthrene-d10 % recovery**	%	TM218		82.5	89	82.9	90.5	84.9
Chrysene-d12 % recovery**	%	TM218		79.6	94.8	78.4	111	91.5
Perylene-d12 % recovery**	%	TM218		75	85.5	73.4	102	88.5
Naphthalene	<9 µg/kg	TM218		297 M	609 M	508 M	131 M	146 M
Acenaphthylene	<12 µg/kg	TM218		64.4 M	194 M	184 M	77.6 M	59.3 M
Acenaphthene	<8 µg/kg	TM218		24.7 M	34.5 M	24.3 M	62.6 M	25.4 M
Fluorene	<10 µg/kg	TM218		54 M	154 M	162 M	77 M	47.6 M
Phenanthrene	<15 µg/kg	TM218		433 M	1350 M	1080 M	636 M	420 M
Anthracene	<16 µg/kg	TM218		109 M	364 M	231 M	144 M	132 M
Fluoranthene	<17 µg/kg	TM218		619 M	2020 M	1190 M	1270 M	706 M
Pyrene	<15 µg/kg	TM218		482 M	1510 M	852 M	1000 M	612 M
Benz(a)anthracene	<14 µg/kg	TM218		299 M	1050 M	437 M	701 M	330 M
Chrysene	<10 µg/kg	TM218		337 M	1110 M	454 M	668 M	363 M
Benzo(b)fluoranthene	<15 µg/kg	TM218		428 M	1490 M	576 M	983 M	464 M
Benzo(k)fluoranthene	<14 µg/kg	TM218		158 M	462 M	205 M	351 M	135 M
Benzo(a)pyrene	<15 µg/kg	TM218		243 M	847 M	322 M	553 M	272 M
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218		220 M	681 M	281 M	426 M	208 M
Dibenzo(a,h)anthracene	<23 µg/kg	TM218		48 M	161 M	60.1 M	86.2 M	45.2 M
Benzo(g,h,i)perylene	<24 µg/kg	TM218		201 M	628 M	250 M	401 M	198 M
PAH, Total Detected USEPA 16	<118 µg/kg	TM218		4020	12700	6820	7570	4160

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		79.6	133 4	92.7	51.1 4	58.1 4	72.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		1110	<1000	<1000	27600	4250	1270
Aliphatics >C21-C35	<1000 µg/kg	TM414		2410	<1000	<1000	1010000	12600	3580
Aliphatics >C35-C44	<1000 µg/kg	TM414		<1000	<1000	<1000	1330000	1870	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		<5000	<5000	<5000	2370000	19000	5230
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		62700	<10000	<10000	3400000	49500	24600
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10	<10 4	<10	<10 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	<1000	<10000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		2260	3770	<1000	18800	4960	2270
Aromatics > EC21-EC35	<1000 µg/kg	TM414		43200	3670	<1000	930000	21400	8870
Aromatics >EC35-EC44	<1000 µg/kg	TM414		12600	<1000	<1000	85300	3540	7870
Aromatics > EC40-EC44	<1000 µg/kg	TM414		1530	<1000	<1000	<10000	<1000	4210
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		58100	8500	<5000	1030000	30500	19400
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		58100	<10000	<10000	3400000	49500	24600
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20	<20 4	<20	<20 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		63.6 4	107	38.7 4	60.5 4	31.4 4	80.4
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	23.3 4	29.7 4	<10 4	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	22.2 4	36.1 4	<10 4	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2020	<1000	1290	1290	2650	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		6330	<1000	6190	5960	15100	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		28000	2290	41300	23700	49900	5370
Aliphatics >C35-C44	<1000 µg/kg	TM414		2020	<1000	11000	5390	19100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		39200	<5000	59800	36300	86800	5800
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		123000	40800	101000	54900	160000	<10000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10 4	<10 4	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	14.4 4	24.5 4	<10 4	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	1880	<1000	3450	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		6460	<1000	10000	2190	14700	<1000
Aromatics > EC21-EC35	<1000 µg/kg	TM414		53100	25800	27400	15000	49800	1610
Aromatics >EC35-EC44	<1000 µg/kg	TM414		22800	11400	1320	<1000	4550	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		5060	2010	<1000	<1000	1430	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		83400	37900	41500	18600	73500	<5000
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		123000	37900	101000	55000	160000	<10000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	65.8 4	<50 4	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50 4	<50 4	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	65.8 4	<20 4	<20

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
GRO Surrogate % recovery**	%	TM089		68.6 4	72	49.5 4	79.3	118	118
Aliphatics >C5-C6	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		2330	<1000	<1000	<1000	1260	<1000
Aliphatics >C16-C21	<1000 µg/kg	TM414		14300	<1000	1390	<1000	11700	<1000
Aliphatics >C21-C35	<1000 µg/kg	TM414		73900	<1000	13800	2530	76800	7910
Aliphatics >C35-C44	<1000 µg/kg	TM414		35400	<1000	2230	<1000	26100	<1000
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		126000	<5000	17900	<5000	116000	8850
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		<10 4	<10	<10 4	<10	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		<1000	<1000	2590	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		4300	<1000	32200	<1000	1390	1010
Aromatics > EC21-EC35	<1000 µg/kg	TM414		35300	<1000	76000	2230	14700	4240
Aromatics >EC35-EC44	<1000 µg/kg	TM414		3160	<1000	8600	<1000	<1000	<1000
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000	<1000
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		43600	<5000	120000	<5000	17300	6260
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		169000	<10000	138000	<10000	133000	15100
Total Aliphatics >C5-C10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50 4	<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		<20 4	<20	<20 4	<20	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

TPH CWG (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
GRO Surrogate % recovery**	%	TM089		82.1	25.9 4	71.5	98.6	72.2
Aliphatics >C5-C6	<10 µg/kg	TM089		<10	<10 4	13.4	<10	<10
Aliphatics >C6-C8	<10 µg/kg	TM089		41.7	<10 4	61.6	<10	<10
Aliphatics >C8-C10	<10 µg/kg	TM089		38.4	<10 4	67.2	<10	<10
Aliphatics >C10-C12	<1000 µg/kg	TM414		1220	<1000	<1000	<1000	<1000
Aliphatics >C12-C16	<1000 µg/kg	TM414		8050	1530	1210	3470	1330
Aliphatics >C16-C21	<1000 µg/kg	TM414		19800	7720	5090	16200	47600
Aliphatics >C21-C35	<1000 µg/kg	TM414		76100	35700	25100	94200	22800
Aliphatics >C35-C44	<1000 µg/kg	TM414		30000	10500	8860	42400	12500
Total Aliphatics >C10-C44	<5000 µg/kg	TM414		135000	55500	40200	156000	84200
Total Aliphatics & Aromatics >C10-C44	<10000 µg/kg	TM414		189000	81600	68800	190000	150000
Aromatics >EC5-EC7	<10 µg/kg	TM089		<10	<10 4	<10	<10	<10
Aromatics >EC7-EC8	<10 µg/kg	TM089		12.1	<10 4	<10	<10	<10
Aromatics >EC8-EC10	<10 µg/kg	TM089		25.2	<10 4	44.8	<10	<10
Aromatics > EC10-EC12	<1000 µg/kg	TM414		<1000	<1000	<1000	<1000	<1000
Aromatics > EC12-EC16	<1000 µg/kg	TM414		3640	<1000	<1000	<1000	<1000
Aromatics > EC16-EC21	<1000 µg/kg	TM414		11000	4110	3750	3490	12900
Aromatics > EC21-EC35	<1000 µg/kg	TM414		36300	19800	20900	28300	41600
Aromatics >EC35-EC44	<1000 µg/kg	TM414		2150	1530	2890	1300	10400
Aromatics > EC40-EC44	<1000 µg/kg	TM414		<1000	<1000	1120	<1000	2650
Total Aromatics > EC10-EC44	<5000 µg/kg	TM414		53700	26200	28600	33500	65900
Total Aliphatics & Aromatics >C5-C44	<10000 µg/kg	TM414		189000	81600	69000	190000	150000
Total Aliphatics >C5-C10	<50 µg/kg	TM089		80.1	<50 4	142	<50	<50
Total Aromatics >EC5-EC10	<50 µg/kg	TM089		<50	<50 4	<50	<50	<50
GRO >C5-C10	<20 µg/kg	TM089		80.1	<20 4	142	<20	<20

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2
			Depth (m)	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021	29/01/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652632	23652638	23652642	23652650	23652548	23652599
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	112	115	118	106	109
Toluene-d8**	%	TM116		96	99.1	98.3	93.2	97.3	99.1
4-Bromofluorobenzene**	%	TM116		95.7	96.5	97.8	88.1	90	97.6
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	AL21-1	AL21-2	P20-1	P20-2	P21-1	P21-2
			Depth (m)	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30	0.30 - 0.30	1.50 - 1.50
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	29/01/2021	29/01/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652657	23652664	23652671	23652552	23652557	23652561
			AGS Reference						
Dibromofluoromethane**	%	TM116		116	110	100	100	99.3	111
Toluene-d8**	%	TM116		95.3	98	94.7	96.8	92.9	99.5
4-Bromofluorobenzene**	%	TM116		88.1	94.5	87.6	88	85.4	94.7
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	441 M	<260 M	320 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

VOC MS (S)

Results Legend	
#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2
			Depth (m)	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652565	23652571	23652577	23652581	23652618	23652623
			AGS Reference						
Dibromofluoromethane**	%	TM116		106	113	102	113	110	112
Toluene-d8**	%	TM116		94.5	100	95.2	99.7	98.4	99.1
4-Bromofluorobenzene**	%	TM116		90.6	87.6	89.1	93.2	100	96.4
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 #	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 #	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 #	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 #	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		286 M	<260 #	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800	<800

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

VOC MS (S)

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
aq	Aqueous / settled sample.
diss.filt	Dissolved / filtered sample.
tot.unfilt	Total / unfiltered sample.
*	Subcontracted - refer to subcontractor report for accreditation status.
**	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery
(F)	Trigger breach confirmed
1-4+$@	Sample deviation (see appendix)

Component	LOD/Units	Method	Customer Sample Ref.	R21-1	R21-2	R21-3	R22-1	R22-2
			Depth (m)	0.30 - 0.30	1.00 - 1.00	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
			Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
			Date Sampled	01/02/2021	01/02/2021	01/02/2021	01/02/2021	01/02/2021
			Sample Time	.	.	.	.	.
			Date Received	02/02/2021	02/02/2021	02/02/2021	02/02/2021	02/02/2021
			SDG Ref	210202-91	210202-91	210202-91	210202-91	210202-91
			Lab Sample No.(s)	23652585	23652589	23652594	23652609	23652613
			AGS Reference					
Dibromofluoromethane**	%	TM116		116	105	105	112	109
Toluene-d8**	%	TM116		96.2	94.1	95	99.4	97.7
4-Bromofluorobenzene**	%	TM116		95.4	79.1	87.6	94.7	94.2
Methyl Tertiary Butyl Ether	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Benzene	<9 µg/kg	TM116		<180 M	<180 M	<180 M	<180 M	<180 M
Toluene	<7 µg/kg	TM116		<140 M	<140 M	<140 M	<140 M	<140 M
Ethylbenzene	<4 µg/kg	TM116		<80 M	<80 M	<80 M	<80 M	<80 M
p/m-Xylene	<10 µg/kg	TM116		<200 #	<200 #	<200 #	<200 #	<200 #
o-Xylene	<10 µg/kg	TM116		<200 M	<200 M	<200 M	<200 M	<200 M
Naphthalene	<13 µg/kg	TM116		<260 M	<260 M	<260 M	<260 M	<260 M
Sum of Detected Xylenes	<0.02 mg/kg	TM116		<0.4	<0.4	<0.4	<0.4	<0.4
Sum of BTEX	<40 µg/kg	TM116		<800	<800	<800	<800	<800

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+§@	Sample deviation (see appendix)

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AJ21-1 0.30 - 0.30 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652632 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652642 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AK22-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652548 TM048	08/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	AL21-1 0.50 - 0.50 SOLID 29/01/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652657 TM048	08/02/21	Eva Guerra	bundle of fibres in soil	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P20-1 0.50 - 0.50 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652671 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	P21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652557 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q20-1 0.60 - 0.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652565 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Received SDG Original Sample Method Number	Q21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652577 TM048	08/02/2021	James Richards	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

Validated

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Fibrous Actinolite	Fibrous Anthophyllite	Fibrous Tremolite	Non-Asbestos Fibre
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	Q22-2 1.70 - 1.70 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652623 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-1 0.30 - 0.30 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652585 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R21-3 2.20 - 2.20 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652594 TM048	09/02/2021	Marcin Magdziarek	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	R22-2 1.60 - 1.60 SOLID 01/02/2021 00:00:00 02/02/2021 05:00:00 210202-91 23652613 TM048	08/02/2021	Paul Poynton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Asbestos Quantification - Full

Results Legend

#	ISO17025 accredited.
M	*m*CERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+$@	Sample deviation (see appendix)

		Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
Cust. Sample Ref.	AL21-1	None (#)	ACM debris in soil	0.0203 (#)	<0.001 (#)	0.0203 (#)
Depth (m)	0.50 - 0.50					
Sample Type	SOLID					
Date Sampled	29/01/2021 00:00:00					
Date Receieved	02/02/2021 05:00:00					
SDG	210202-91					
Original Sample	23652657					
Method Number	TM304					

Table of Results - Appendix

Method No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Method 4500A & B, AWWA/APHA, 20th Ed., 1999	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM062 (S)	National Grid Property Holdings Methods for the Collection & Analysis of Samples from National Grid Sites version 1 Sec 3.9	Determination of Phenols in Soils by HPLC
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-FID

NA = not applicable.

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

CERTIFICATE OF ANALYSIS

SDG:	210202-91	**Client Reference:**	P18-669	**Report Number:**	590436
Location:	Llanwern	**Order Number:**	108282	**Superseded Report:**	590434

Test Completion Dates

Lab Sample No(s)	23652632	23652638	23652642	23652650	23652548	23652599	23652657	23652664	23652671	23652552
Customer Sample Ref.	AJ21-1	AJ21-2	AK21-1	AK21-2	AK22-1	AK22-2	AL21-1	AL21-2	P20-1	P20-2
AGS Ref.										
Depth	0.30 - 0.30	1.30 - 1.30	0.50 - 0.50	1.20 - 1.20	0.50 - 0.50	1.60 - 1.60	0.50 - 0.50	1.40 - 1.40	0.50 - 0.50	1.30 - 1.30
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021		08-Feb-2021	
Asbestos Quantification - Full							12-Mar-2021			
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021	09-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021

Lab Sample No(s)	23652557	23652561	23652565	23652571	23652577	23652581	23652618	23652623	23652585	23652589
Customer Sample Ref.	P21-1	P21-2	Q20-1	Q20-2	Q21-1	Q21-2	Q22-1	Q22-2	R21-1	R21-2
AGS Ref.										
Depth	0.30 - 0.30	1.50 - 1.50	0.60 - 0.60	1.80 - 1.80	0.30 - 0.30	1.90 - 1.90	0.30 - 0.30	1.70 - 1.70	0.30 - 0.30	1.00 - 1.00
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	08-Feb-2021		09-Feb-2021		08-Feb-2021			09-Feb-2021	09-Feb-2021	
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	08-Feb-2021	05-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021
PAH by GCMS	05-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	05-Feb-2021	05-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	05-Feb-2021
pH	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	03-Feb-2021	04-Feb-2021	04-Feb-2021	04-Feb-2021	03-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	12-Feb-2021	12-Feb-2021	09-Feb-2021	10-Feb-2021	09-Feb-2021	10-Feb-2021	12-Feb-2021	12-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	03-Feb-2021	02-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	08-Feb-2021	09-Feb-2021	09-Feb-2021	09-Feb-2021	08-Feb-2021

Lab Sample No(s)	23652594	23652609	23652613
Customer Sample Ref.	R21-3	R22-1	R22-2
AGS Ref.			
Depth	2.20 - 2.20	0.20 - 0.20	1.60 - 1.60
Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammonium Soil by Titration	09-Feb-2021	09-Feb-2021	09-Feb-2021
Asbestos ID in Solid Samples	09-Feb-2021		08-Feb-2021
Cyanide Comp/Free/Total/Thiocyanate	05-Feb-2021	05-Feb-2021	05-Feb-2021
EPH CWG GC (S)	08-Feb-2021	08-Feb-2021	08-Feb-2021
GRO by GC-FID (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
Metals in solid samples by OES	09-Feb-2021	09-Feb-2021	09-Feb-2021
PAH by GCMS	04-Feb-2021	09-Feb-2021	05-Feb-2021
pH	04-Feb-2021	03-Feb-2021	04-Feb-2021
Phenols by HPLC (S)	10-Feb-2021	10-Feb-2021	10-Feb-2021
Sample description	03-Feb-2021	03-Feb-2021	03-Feb-2021
Total Organic Carbon	09-Feb-2021	09-Feb-2021	09-Feb-2021
TPH CWG GC (S)	09-Feb-2021	10-Feb-2021	09-Feb-2021
VOC MS (S)	09-Feb-2021	08-Feb-2021	09-Feb-2021

Appendix General

1. Results are expressed on a dry weight basis (dried at 35ºC) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

18. **Sample Deviations**

If a sample is classed as deviated then the associated results may be compromised.

1	**Container with Headspace provided for volatiles analysis**
2	**Incorrect container received**
3	**Deviation from method**
4	**Matrix interference**
♦	**Sample holding time exceeded in laboratory**
@	**Sample holding time exceeded due to late arrival of instructions or samples**
§	**Sampled on date not provided**

19. **Asbestos**

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2005), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials are obtained from supplied bulk materials which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2005).

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.
Standing Committee of Analysts, *The Quantification of Asbestos in Soil (2017).*

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

Appendix E: Gas Monitoring Data

5e1 Gas Monitoring Results

5e1-WS01

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
27/09/22	0.9	0.9	0.1	0.0	0.4	0.4	0.0	0.0	1005	Steady	2.15	2.89	0	0
05/10/22	2.5	2.5	0.1	0.1	0.4	0.4	0.0	-0.1	1006	Rising	2.10	2.89	0	1
20/10/22	1.6	1.6	0.0	0.0	0.4	0.4	0.0	0.0	1008	Steady	2.10	2.88	0	0
12/10/22	2.0	2.0	0.1	0.0	0.3	0.3	0.0	0.0	1021	Rising	2.14	2.83	0	0
25/10/22	1.4	1.4	0.1	0.1	0.4	0.4	0.0	0.0	1011	Rising	2.15	2.85	0	0
31/10/22	0.2	0.2	0.1	0.0	0.4	0.4	0.0	0.0	1013	Falling	2.04	2.90	0	0

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	0.4	0.3

*0.3 flow used to generate GSV as no flow detected

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0012

5e1-WS03

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
27/09/22	0.5	0.5	0.10	0.10	0.8	0.8	0.0	0.0	1004	Steady	1.92	3.31	0	1
05/10/22	16.9	16.4	0.0	0.0	0.2	0.2	0.1	0.1	1008	Rising	1.90	3.31	0	0
20/10/22	7.8	7.8	0.0	0.0	0.3	0.3	0.0	0.0	1008	Steady	1.88	3.31	0	0
12/10/22	6.5	6.5	0.0	0.0	0.2	0.2	0.0	0.0	1021	Rising	1.96	3.30	0	0
25/10/22	14.0	14.0	0.1	0.1	0.3	0.3	0.1	0.0	1011	Rising	1.81	3.30	0	1
31/10/22	15.7	15.7	0.1	0.1	0.4	0.3	0.0	0.0	1013		1.68	3.31	0	0

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	0.8	0.1

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0008

5e1-WS05

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
29/09/22	6.2	6.2	0.1	0.0	0.2	0.2	0.1	0.0	1004	Steady	3.10	4.20	0	0
05/10/22	2.6	2.6	0.1	0.0	0.2	0.2	0.2	0.0	1008	Rising	3.05	4.20	0	0
20/10/22	3.9	3.9	0.0	0.0	0.3	0.2	0.1	0.0	1008	Steady	3.03	4.20	0	0
12/10/22	7.1	7.1	0.0	0.0	0.2	0.2	0.0	0.0	1021	Rising	3.05	4.20	0	1
25/10/22	0.9	0.9	0.1	0.1	0.3	0.3	0.0	0.0	1011	Rising	3.03	4.20	0	0
31/10/22	0.2	0.2	0.0	0.0	0.4	0.4	0.0	0.0	1013		2.95	4.20	0	0

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	0.4	0.2

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0008

5e1-SW06

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
29/09/22	0.4	0.4	0.1	0.0	1.6	1.6	0.0	0.0	1005	Steady	3.65	4.35	0	1
05/10/22	0.4	0.4	0.0	0.0	1.5	1.5	0.0	-0.1	1007	Rising	3.60	4.35	0	1
20/10/22	2.2	2.2	0.0	0.0	0.8	0.8	0.0	0.0	1008	Steady	3.57	4.34	0	0
12/10/22	2.8	2.8	0.0	0.0	1.0	1.0	0.0	0.0	1021	Rising	3.61	4.36	0	2
25/10/22	10.1	10.1	0.1	0.1	0.6	0.6	0.0	0.0	1010	Rising	3.57	4.35	0	2
31/10/22	0.5	0.5	0.1	0.0	1.4	1.4	0.0	0.0	1013	Falling	3.52	4.35	0	1

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	1.6	0.3

*0.3 flow used to generate GSV as no flow detected

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0048

5e1 Gas Monitoring Results

5e1-WS07

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Min	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
29/09/22	0.3	0.3	0.1	0.0	3.0	3.0	0.0	0.0	1005	Steady	3.24	3.86	0	1
05/10/22	0.2	0.2	0.1	0.0	2.9	2.9	0.1	0.1	1007	Rising	3.20	3.86	0	0
20/10/22	0.2	0.2	0.0	0.0	2.9	2.9	0.0	0.0	1008	Steady	3.18	3.85	0	1
12/10/22	0.2	0.2	0.0	0.0	2.3	2.3	0.2	0.1	1020	Rising	2.20	3.87	0	1
25/10/22	1.2	1.2	0.1	0.1	2.4	2.4	0.0	0.0	1011	Rising	3.16	3.86	0	0
31/10//22	0.1	0.1	0.0	0.0	3.4	3.4	0.0	0.0	1013	Falling	3.12	3.85	0	1

Determining the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	3.4	0.2

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0068

5e1-WS08

Date	Oxygen Concentration (%)		Carbon dioxide concentration (%)		Methane concentration (%)		Flow Rate		Pressure	Pressure Trend	Water Level	Base Level	H2S (ppm)	CO (ppm)
	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady						
29/9/22	5.8	5.8	0.1	0	0.2	0.2	0	0	1005	Steady	DRY	2.38	0	1
5/9/22	0.7	0.7	0.1	0	0.4	0.4	0	0	1006	Rising	DRY	2.39	0	0
20/10/22	0.5	0.5	0.1	0.1	0.4	0.4	0	0	1008	Steady	DRY	2.39	0	1
12/10/22	0.6	0.6	0.1	0	0.3	0.3	0	0	1021	Rising	DRY	2.38	0	1
25/10/22	0.4	0.4	0.1	0.1	0.3	0.3	0	0	1011	Rising	2.32	2.38	0	0
31/10/22	0.3	0.3	0	0	0.4	0.4	0	0	1013	Falling	3.12	3.85	0	1

ning the Gas Screening Value

Maximum Carbon dioxide concentration	Maximum methane	Maximum flow rate
0.1	0.4	0.3

*0.3 flow used to generate GSV as no flow detected

Gas Screening Value (l/hr) = Max. borehole flow rate (l/hr) x Max. gas concentration (%)

Gas Screening Value =	0.0012

Appendix F: Water Screening

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental	Chemtest Job No.:				CWDQRA TN260 Pore Water Criteria*			22-39560	22-39560	22-39767	22-39767	22-39767	23-01523	23-01523	23-01523	23-01523	23-01523	23-10360	23-10360	23-10360	23-10360	23-10360	23-10360	23-18950	23-18950	23-18950	23-18950	23-18950	23-18950			
Quotation No.: Q22-28243	Chemtest Sample ID.:							1526123	1526124	1527137	1527138	1527139	1576105	1576106	1576107	1576108	1576109	1615007	1615008	1615009	1615010	1615011	1615012	1651626	1651627	1651628	1651629	1651630	1651631			
	Client Sample ID.:							5e1-WS01	5e1-WS03	5e1-WS05	5e1-WS06	5e1-WS07	5E1-WS03	5E1-WS05	5E1-WS06	5E1-WS07	5E1-WS08	5e1-WS01	5e1-WS03	5e1-WS05	5e1-WS06	5e1-WS07	5e1-WS08	5e1-WS05	5e1-WS06	5e1-WS07	5e1-WS08	5e1-WS01	5e1-WS03			
	Sample Type:							WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER			
	Date Sampled:							14-Oct-2022	14-Oct-2022	17-Oct-2022	17-Oct-2022	17-Oct-2022	17-Jan-2023	17-Jan-2023	17-Jan-2023	17-Jan-2023	17-Jan-2023	27-Mar-2023	27-Mar-2023	27-Mar-2023	27-Mar-2023	27-Mar-2023	27-Mar-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023			
Determinand	Accred.	SOP	Units	LOD	Average	Upper 95%	Maximum																							Max	Min	95th %
pH	U	1010		N/A				6.9	7.8	9.3	9.9	10.0	10.0	11.5	11.3	11.7	10.9	11.4	9.7	11.3	10.1	11.6	11.1	11.3	9.6	12.3	11.7	11.5	10.4	12.3	6.9	11.7
Electrical Conductivity	U	1020	uS/cm	1.0				7200	3000	1600	2500	2500	1300	2800	2000	3300	1500	2700	700	2000	1600	3700	1200	1300	1500	3900	1300	1200	990	7200.0	700.0	3890.0
Suspended Solids At 105C	U	1030	mg/l	5.0				130	29	60	120	17	23	30	31	31	17	< 5.0	< 5.0	< 5.0	7.0	< 5.0	< 5.0	< 5.0	8.0	< 5.0	24	9.0	69	130.0	7.0	123.0
Total Dissolved Solids	N	1020	mg/l	1.0				4700	2000	1000	1600	1700	870	1800	1300	2200	950	1700	450	1300	1000	2400	780	820	1000	2500	830	800	640	4700.0	450.0	2495.0
Turbidity	N	1060	NTU	1.0				240	18	22	22	8.9	340	170	350	370	130	1.3	12	1.9	3.6	< 1.0	< 1.0	9.5	4.5	1.9	13	9.4	7.6	370.0	1.3	351.0
Biochemical Oxygen Demand	U	1090	mg O2/l	4.0				[B] < 4.0	[B] 10	21	8.0	5.0	5.0	< 4.0	9.0	4.0	< 4.0	< 4.0	4.0	4.0	< 4.0	7.0	7.0	34	7.0	6.0	7.0	5.0	11	34.0	4.0	24.3
Chemical Oxygen Demand	U	1100	mg O2/l	10				71	130	280	130	49	100	67	110	94	53	20	32	69	130	140	25	170	130	190	36	41	73	280.0	20.0	189.0
Dissolved Oxygen	N	1150	mg O2/l	0.50				7.7	7.6	5.4	6.8	6.8	9.0	9.5	9.1	9.4	9.3	5.8	7.2	5.6	6.7	6.0	5.6	9.5	9.5	9.6	9.5	9.4	9.1	9.6	5.4	9.5
Redox Potential	N	1170	mV	N/A				-180	-81	0.000	0.000	0.000	-45	-14	15	-300	-230	-70	-75	-220	-160	-280	-250	-68	-91	-280	-220	-180	-110	15.0	-300.0	0.0
Chloride	U	1220	mg/l	1.0				160	90	120	200	87	86	47	88	70	26	33	23	55	81	67	43	72	130	90	48	51	24	200.0	23.0	158.5
Fluoride	U	1220	mg/l	0.050				0.92	0.62	0.43	0.43	0.64	0.45	0.42	0.29	0.80	0.24	0.28	0.51	0.48	0.55	0.88	0.31	0.58	0.67	0.97	0.29	0.34	0.60	1.0	0.2	0.9
Ammonia (Free)	N	1220	mg/l	0.050				< 0.050	0.43	5.0	8.3	6.5	14	5.4	12	13	2.5	0.93	2.7	6.9	6.1	12	4.8	13	8.1	18	7.7	6.7	5.6	18.0	0.4	14.0
Ammonia (Free) as N	N	1220	mg/l	0.050				< 0.050	0.43	5.0	8.3	6.5	14	5.4	12	13	2.5	0.93	2.7	6.9	6.1	12	4.8	13	8.1	18	7.7	6.7	5.6	18.0	0.4	14.0
Ammonium	U	1220	mg/l	0.050				7.3	17	5.6	2.3	1.5	3.2	< 0.050	0.15	0.064	0.068	< 0.050	1.3	0.072	1.1	0.078	0.086	0.15	4.6	< 0.050	< 0.050	0.052	< 0.050	17.0	0.1	9.2
Ammoniacal Nitrogen	U	1220	mg/l	0.050				5.7	14	9.3	10	7.7	16	5.4	12	13	2.6	0.93	3.7	6.9	6.9	12	4.8	13	12	18	7.8	6.8	6.0	18.0	0.9	15.9
Phosphorus (Dissolved)	N	1220	mg/l	0.020				0.021	0.023	0.023	0.021	0.025	0.022	0.021	0.021	0.023	0.021	0.020	0.020	< 0.020	0.021	0.020	0.020	0.021	0.025	0.021	0.020	0.021	0.020	0.0	0.0	0.0
Phosphate	U	1220	mg/l	0.200				< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.0	0.0	N/A
Phosphorus (Dissolved)	U	1220	mg/l	0.020				0.021	0.022	0.023	0.021	0.024	0.021	0.021	0.020	0.023	0.021	< 0.020	< 0.020	< 0.020	0.020	< 0.020	< 0.020	0.021	0.025	0.021	0.020	0.021	0.020	0.0	0.0	0.0
Sulphur	N	1220	mg/l	1.0				220	210	260	430	20	190	63	200	37	210	57	100	100	270	23	80	130	220	13	67	110	140	430.0	13.0	269.5
Sulphate	U	1220	mg/l	1.0				670	630	770	1300	61	580	190	600	110	640	170	300	300	800	68	240	380	650	39	200	340	430	1300.0	39.0	798.5
Cyanide (Total)	U	1300	mg/l	0.050				0.15	0.090	0.080	0.060	< 0.050	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.2	0.1	0.1
Cyanide (Free)	U	1300	mg/l	0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.0	0.0	N/A
Thiocyanate	U	1300	mg/l	0.50				0.56	< 0.50	0.79	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.8	0.6	0.8
Cyanide (Complex)	U	1300	mg/l	0.050				0.15	0.090	0.080	0.060	< 0.050	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.2	0.1	0.1
Sulphide	U	1325	mg/l	0.050				[B] < 0.050	[B] < 0.050	< 0.050	< 0.050	2.4	< 0.050	< 0.050	< 0.050	1.8	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	1.7	< 0.050	0.054	< 0.050	1.3	< 0.050	< 0.050	< 0.050	2.4	0.1	2.3
Calcium (Dissolved)	U	1455	mg/l	2.00				290	260	380	680	13	220	210	250	200	250	260	110	230	320	320	110	200	260	370	130	160	170	680.0	13.0	379.5
Magnesium (Dissolved)	U	1455	mg/l	0.20				0.50	14	1.6	1.3	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.23	< 0.20	2.0	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	5.4	< 0.20	< 0.20	< 0.20	0.41	14.0	0.2	11.0
Calcium (Total)	N	1455	mg/l	5.0				320	260	370	660	260	220	270	270	280	240	290	110	250	340	370	130	250	340	460	160	200	220	660.0	110.0	455.5
Magnesium (Total)	N	1455	mg/l	0.50	12000	44700	566000	0.53	14	0.54	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	8.7	< 0.50	< 0.50	< 0.50	0.77	14.0	0.5	12.4
Total Hardness as CaCO3	U	1270	mg/l	15				720	700	950	1700	32	550	540	630	490	640	650	290	570	800	810	270	510	680	920	320	390	430	1700.0	32.0	948.5
Arsenic (Dissolved)	U	1455	µg/l	0.20				21	25	70	29	20	38	19	34	20	15	7.2	11	26	44	23	13	46	21	29	19	17	19	70.0	7.2	45.9
Boron (Dissolved)	U	1455	µg/l	10.0				170	280	110	120	11	78	11	29	22	61	< 10	67	16	90	16	12	41	160	20	22	40	87	280.0	11.0	170.0
Barium (Dissolved)	U	1455	µg/l	5.00				99	110	70	110	170	58	53	65	220	47	110	47	59	64	570	36	49	60	700	66	79	56	700.0	36.0	552.5
Beryllium (Dissolved)	U	1455	µg/l	1.00				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0	0.0	N/A
Cadmium (Dissolved)	U	1455	µg/l	0.11				< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.0	0.0	N/A
Chromium (Dissolved)	U	1455	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.7	0.73	< 0.50	3.7	< 0.50	2.1	< 0.50	1.4	< 0.50	2.9	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	3.7	0.7	3.5
Copper (Dissolved)	U	1455	µg/l	0.50				2.4	15	5.7	4.6	< 0.50	0.60	26	9.8	1.2	13	16	11	15	2.5	< 0.50	16	0.65	0.56	< 0.50	2.4	1.2	3.5	26.0	0.6	17.0
Iron (Dissolved)	N	1455	µg/l	5.0	113570	314670	2949270	75	490	61	46	< 5.0	98	< 5.0	43	34	35	< 5.0	23	< 5.0	93	< 5.0	8.1	27	57	< 5.0	12	63	45	490.0	8.1	196.0
Mercury (Dissolved)	U	1455	µg/l	0.05				< 0.05	< 0.05	< 0.05	< 0.05	0.31	0.37	< 0.05	0.07	0.09	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.06	0.05	0.08	< 0.05	0.06	< 0.05	0.09	0.11	0.4	0.1	0.3
Manganese (Dissolved)	U	1455	µg/l	0.50				1.6	310	5.7	3.3	< 0.50	0.96	< 0.50	0.98	0.76	0.72	< 0.50	1.2	< 0.50	1.0	< 0.50	1.1	1.1	48	0.61	0.84	< 0.50	1.2	310.0	0.6	113.5
Nickel (Dissolved)	U	1455	µg/l	0.50				10	10	33	9.1	15	22	10	22	23	4.7	4.5	9.7	8.9	17	35	12	19	8.6	48	12	10	13	48.0	4.5	34.9
Lead (Dissolved)	U	1455	µg/l	0.50				< 0.50	< 0.50	1.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.59	< 0.50	< 0.50	< 0.50	0.51	< 0.50	0.74	< 0.50	1.2	1.3	0.5	1.3
Antimony (Dissolved)	U	1455	µg/l	0.50				0.62	5.1	2.1	1.4	< 0.50	1.6	0.52	0.95	< 0.50	0.78	< 0.50	1.3	< 0.50	0.97	< 0.50	< 0.50	< 0.50	0.73	< 0.50	< 0.50	0.70	1.3	5.1	0.5	3.3
Selenium (Dissolved)	U	1455	µg/l	0.50				11	12	5.8	6.4	10	13	5.6	13	5.7	16	5.6	4.8	4.2	3.7	4.2	9.2	4.6	1.1	4.5	6.0	5.9	3.7	16.0	1.1	13.0
Vanadium (Dissolved)	U	1455	µg/l	0.50	970	3010	13498	110	44	15	59	3.3	50	12	48	9.4	79	12	49	14	29	2.1	60	25	11	2.2	44	65	36	110.0	2.1	78.3
Zinc (Dissolved)	U	1455	µg/l	2.5				4.3	7.7	3.6	3.0	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	6.0	5.8	6.7	7.7	3.8	7.7	2.5	7.7
Arsenic (Total)	N	1455	µg/l	0.20				23	26	71	31	21	39	18	34	20	15	8.6	12	28	49	27	16	60	27	36	23	22	25	71.0	8.6	59.5
Boron (Total)	N	1455	µg/l	10.0				160	260	120	140	20	79	12	29	23	52	< 10	69	17	91	18	13	54	230	31	27	54	120	260.0	12.0	230.0
Barium (Total)	N	1455	µg/l	5.00				110	100	67	120	620	62	78	73	360	47	120	49	71	74	630	50	65	86	890	84	100	86	890.0	47.0	629.5
Beryllium (Total)	N	1455	µg/l	1.00				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	0.0	0.0	N/A
Cadmium (Total)	N	1455	µg/l	0.11				< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.0	0.0	N/A
Chromium (Total)	N	1455	µg/l	0.50				1.2	1.2	2.9	2.3	5.9	6.3	11	10	8.4	13	4.1	3.7	3.5	3.1	2.5	3.9	0.68	4.0	3.0	0.55	1.1	1.5	13.0	0.6	11.0
Copper (Total)	N	1455	µg/l	0.50				3.6	17	9.3	7.6	1.0	3.2	31	17	2.4	17	19	13	19	4.1	0.53	19	5.2	7.1	4.9	7.1	7.0	12	31.0	0.5	19.0
Iron (Total)	N	1455	µg/l	5.0				320	1600	150	120	17	210	67	97	46	87	170	260	96	250	71	190	150	2400	930	140	1200	730	2400.0	17.0	1580.0
Mercury (Total)	N	1455	µg/l	0.05				0.17	0.07	0.13	0.14	0.32	0.29	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.07	0.05	0.12	0.10	0.07	0.09	0.15	0.22	0.3	0.1	0.3
Manganese (Total)	N	1455	µg/l	0.50				25	310	9.2	9.4	1.4	6.4	3.3	5.3	2.7	3.7	3.8	20	4.6	13	2.6	6.5	2.8	110	7.6	3.6	7.7	41	310.0	1.4	106.6
Nickel (Total)	N	1455	µg/l	0.50				10	9.3	34	9.0	16	24	12	23	26	6.3	9.4	9.7	13	18	40	12	22	11	57	14	13	17	57.0	6.3	39.7
Lead (Total)	N	1455	µg/l	0.50				1.1	1.3	7.5	1.4	< 0.50	2.1	0.64	2.1	< 0.50	< 0.50	2.3	2.9	1.5	2.5	< 0.50	4.7	2.1	2.4	1.2	3.1	2.9	11	11.0	0.6	8.0
Antimony (Total)	N	1455	µg/l	0.50				4.2	5.8	4.9	3.9	2.3	1.5	0.53	0.61	< 0.50	0.71	0.57	1.3	< 0.50	1.2	< 0.50	0.52	0.62	1.0	< 0.50	< 0.50	0.86	1.9	5.8	0.5	5.1
Selenium (Total)	N	1455	µg/l	0.50				15	9.7	8.5	8.4	12	13	5.6	10	5.7	12	5.8	5.0	4.6	3.9	4.3	9.5	6.2	2.6	6.5	7.8	5.6	5.2	15.0	2.6	13.0
Vanadium (Total)	N	1455	µg/l	0.50				140	73	38	54	14	54	17	56	9.6	94	21	56	18	34	4.6	66	33	14	7.4	56	83	48	140.0	4.6	93.5
Zinc (Total)	N	1455	µg/l	2.5				4.0	3.6	4.8	15	< 2.5	5.4	12	5.4	2.7	3.4	7.9	13	15	27	6.8	23	37	75	26	13	37	150	150.0	2.7	75.0
Chromium (Hexavalent)	U	1490	µg/l	20				< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	0.0	0.0	N/A
Dissolved Organic Carbon	U	1610	mg/l	2.0				23	47	130	71	15	28	19	35	27	13	9.4	15	28	52	60	13	63	52	90	15	16	29	130.0	9.4	89.1
Total Inorganic Carbon	N	1220	mg/l	2.5				14	38	24	24	50	23	50	26	58	24	26	13	21	19	82	15	23	22	130	24	18	13	130.0	13.0	80.8
Total Organic Carbon	U	1610	mg/l	2.0				22	47	130	72	14	29	19	34	29	13	9.4	15	28	53	59	12	63	55	87	16	16	31	130.0	9.4	86.3
Aliphatic TPH >C5-C6	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C6-C8	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C8-C10	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C10-C12	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C12-C16	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C16-C21	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C21-C35	N	1675	µg/l	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	0.0	0.0	N/A
Aliphatic TPH >C35-C44	N	1675	µg/l	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	0.0	0.0	N/A
Total Aliphatic Hydrocarbons	N	1675	µg/l	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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.0	0.0	N/A
Aromatic TPH >C5-C7	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C7-C8	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C8-C10	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C10-C12	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C12-C16	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C16-C21	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C21-C35	N	1675	µg/l	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	0.0	0.0	N/A
Aromatic TPH >C35-C44	N	1675	µg/l	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	0.0	0.0	N/A
Total Aromatic Hydrocarbons	N	1675	µg/l	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	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	0.0	0.0	N/A
Total Petroleum Hydrocarbons	N	1675	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	0.0	0.0	N/A
Dichlorodifluoromethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Chloromethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Vinyl Chloride	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Bromomethane	U	1760	µg/l	5				< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5															
Chloroethane	U	1760	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0															
Trichlorofluoromethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,1-Dichloroethene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,1-Dichloroethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
cis 1,2-Dichloroethene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Bromochloromethane	U	1760	µg/l	5				< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5															
Trichloromethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,1,1-Trichloroethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Tetrachloromethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,1-Dichloropropene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Benzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2-Dichloroethane	U	1760	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0															
Trichloroethene	N	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2-Dichloropropane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Dibromomethane	U	1760	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10															
Bromodichloromethane	U	1760	µg/l	5				< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5															
cis-1,3-Dichloropropene	N	1760	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10															
Toluene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Trans-1,3-Dichloropropene	N	1760	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10															
1,1,2-Trichloroethane	U	1760	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10															
Tetrachloroethene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,3-Dichloropropane	U	1760	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0															
Dibromochloromethane	U	1760	µg/l	10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10															
1,2-Dibromoethane	U	1760	µg/l	5				< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5															
Chlorobenzene	N	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0															
Ethylbenzene	U	1760	µg/l	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	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
o-Xylene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Styrene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Tribromomethane	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Isopropylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Bromobenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2,3-Trichloropropane	N	1760	µg/l	50				< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50															
N-Propylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
2-Chlorotoluene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
4-Chlorotoluene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Tert-Butylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Sec-Butylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,3-Dichlorobenzene	N	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
4-Isopropyltoluene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,4-Dichlorobenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
N-Butylbenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2-Dichlorobenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50				< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50															
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
Hexachlorobutadiene	U	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0															
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0															
N-Nitrosodimethylamine	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Phenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Chlorophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
1,3-Dichlorobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
1,4-Dichlorobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
1,2-Dichlorobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Hexachloroethane	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Methylphenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Nitrobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Isophorone	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Nitrophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,4-Dimethylphenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,4-Dichlorophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Naphthalene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Chloroaniline	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Hexachlorobutadiene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Methylnaphthalene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Hexachlorocyclopentadiene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,4,6-Trichlorophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,4,5-Trichlorophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Chloronaphthalene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Nitroaniline	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Acenaphthylene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Dimethylphthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,6-Dinitrotoluene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Acenaphthene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
3-Nitroaniline	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Dibenzofuran	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Chlorophenylphenylether	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2,4-Dinitrotoluene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Fluorene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Diethyl Phthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Nitroaniline	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Azobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Hexachlorobenzene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Pentachlorophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Phenanthrene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Anthracene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Carbazole	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Di-N-Butyl Phthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Fluoranthene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Pyrene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Butylbenzyl Phthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Benzo[a]anthracene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Chrysene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Di-N-Octyl Phthalate	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Benzo[b]fluoranthene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Benzo[k]fluoranthene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Benzo[a]pyrene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Benzo[g,h,i]perylene	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
4-Nitrophenol	N	1790	µg/l	0.50				< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50															
Naphthalene	U	1800	µg/l	0.10	231	165	128680	< 0.10	< 0.10	< 0.10	0.63	< 0.10	< 0.10	1.8	1.2	0.51	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	22	< 0.10	< 0.10	< 0.10	< 0.10	22.0	0.5	17.0
Acenaphthylene	U	1800	µg/l	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	3.2	< 0.10	< 0.10	< 0.10	< 0.10	3.2	3.2	3.2
Acenaphthene	U	1800	µg/l	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	0.0	0.0	N/A
Fluorene	U	1800	µg/l	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	1.2	< 0.10	< 0.10	< 0.10	< 0.10	1.2	1.2	1.2
Phenanthrene	U	1800	µg/l	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	1.1	< 0.10	< 0.10	< 0.10	< 0.10	1.1	1.1	1.1
Anthracene	U	1800	µg/l	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	0.0	0.0	N/A
Fluoranthene	U	1800	µg/l	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	0.0	0.0	N/A
Pyrene	U	1800	µg/l	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	0.0	0.0	N/A
Benzo[a]anthracene	U	1800	µg/l	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	0.0	0.0	N/A
Chrysene	U	1800	µg/l	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	0.0	0.0	N/A
Benzo[b]fluoranthene	U	1800	µg/l	0.10	76.7	280	2077	< 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	0.0	0.0	N/A
Benzo[k]fluoranthene	U	1800	µg/l	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	0.0	0.0	N/A
Benzo[a]pyrene	U	1800	µg/l	0.10	0.285	1.13	70	< 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	0.0	0.0	N/A
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	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	0.0	0.0	N/A
Dibenz(a,h)Anthracene	U	1800	µg/l	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	0.0	0.0	N/A
Benzo[g,h,i]perylene	U	1800	µg/l	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	0.0	0.0	N/A
Total Of 16 PAH's	U	1800	µg/l	2.0				< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	28	< 2.0	< 2.0	< 2.0	< 2.0	28.0	28.0	28.0
Total Phenols	U	1920	mg/l	0.030				< 0.030	< 0.030	< 0.030	< 0.030	0.31	0.25	0.083	0.11	0.82	< 0.030	< 0.030	< 0.030	0.20	0.076	1.8	< 0.030	0.57	< 0.030	2.1	< 0.030	< 0.030	0.057	2.1	0.1	2.0

*LOD used for calculations where determinands are < LOD

Formulas

$$EQS = \frac{C_{gw} + Q_{gw}}{Q}$$

$$C_{gw} = \frac{(EQS * Q)}{Q_{gw}}$$

Where:
Qgw = (total rainfall - ET - RO) x permeable surface area (m3/d)
Qol = (total rainfall - E) x impermeable surface area (m3/d)
RO = runoff x permeable surface area
Qr = Qgw + Qol + ROper (m3/d)
Cgw = concentration in groundwater (mg/l)
EQS = chemical-specific (mg/l)

Dilution factor = final volume / initial volume
Dilution factor RESI 430.9
Dilution factor COMM 1702.3

Qgw (total rainfall - ET - RO)	0.005	m/a				
Qol (total rainfall - E)	0.858	m/a				
RO (runoff)	0.532	m/a				
Residential Area			**Qgw**	**Qol**	**Qr**	
Permeable area	676,000.00	m2	3278.6			m3/a
Impermeable area	1,014,000.00	m2		869707.8		m3/a
					1412586.5	m3/a
Celtic Business Park			**Qgw**	**Qol**	**Qr**	
Permeable area	45,000.00	m2	218.3			m3/a
Impermeable area	405,000.00	m2		347368.5		m3/a
					371533.5	m3/a

Calculation Assumptions:
No infiltration occurs across the impermeable area
Runoff from the permeable area contributes to Qtot

Statistical Assumptions:
Less than values have had the < removed and concentrations are assumed to be at LOD

Travel time calculation for water entering MG to discharge to roen			
Distance (m)	150	10	1
Hydraulic gradient (-)	0.013333333	0.013333333	0.013333333
MG k (m/s)	0.0000001	0.0000001	0.0000001
Darcy flux (m/sec)	1.33333E-09	1.33333E-09	1.33333E-09
Time (seconds)	1.125E+11	7.50E+09	7.50E+08
Time (years)	3567	238	24

0.042048

$$Cs = Cl \times \left[Kdc + (\theta w + \theta a \times H) \Big/ Pc \right]$$

Where:

Cl	**Leachate Concentration (mg/l)**
Cs	**Soil Concentration (mg/kg)**
Kd	**Partition Coefficient (l/kg)**
θw	**Water Filled Porosity (fraction)**
θa	**Air Filled Porosity (fraction)**
H	**Henry's Law (dimensionless)**
Pc	**Contaminated Soil Bulk Density (g/cm3)**

Leachate Samples

	Determinand	EQS (mol/l)	Reference	Calculated Cgw (mg/l)		# samples above Cgw		% samples above Cgw		Comparison to Cgw (mg/l)		Max Sampled Value (< removed sheet)		Comparison to Cgw (mg/l)		Average Sampled Value (< removed sheet)
				Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	mol/l	Celtic Business Park	Residential Area	mol/l	
Leachate Data	**Metals**															
	Arsenic	0.05	1	**85.11649**	**21.54253**	0	0	0	0	ok	ok	**0.04900**	ok	ok	**0.01044**	
	Cadmium	0.00025	1	**0.42558**	**0.10771**	0	0	0	0	ok	ok	**0.00464**	ok	ok	**0.00022**	
	Chromium	0.0047	1	**8.00095**	**2.02500**	0	0	0	0	ok	ok	**0.11509**	ok	ok	**0.00739**	
	Copper	0.001	1 (d)	**1.70233**	**0.43085**	0	0	0	0.0	ok	ok	**0.34000**	ok	ok	**0.01811**	
	Iron	1	1	**1702.32990**	**430.85052**	no sample	no sample	no sample	n/a	n/a	n/a	**no sample**	n/a	n/a	**no sample**	
	Lead	0.0012	1 (d)	**2.04280**	**0.51702**	0	0	0	0	ok	ok	**0.00864**	ok	ok	**0.00065**	
	Manganese	0.123	1 (d)	**209.38658**	**52.99461**	no sample	no sample	no sample	no sample	n/a	n/a	**no sample**	n/a	n/a	**no sample**	
	Mercury	0.00007	1	**0.11916**	**0.03016**	0	0	0	0	ok	ok	**0.00007**	ok	ok	**0.00002**	
	Nickel	0.004	1 (d)	**6.80932**	**1.72340**	0	0	0	0	ok	ok	**0.01940**	ok	ok	**0.00434**	
	Selenium	0.01	8	**17.02330**	**4.30851**	0	0	0	0	ok	ok	**0.10500**	ok	ok	**0.01052**	
	Vanadium	0.02	3	**34.04660**	**8.61701**	0	0	0	0	ok	ok	**0.77800**	ok	ok	**0.20426**	
	Zinc	0.0109	1 (d)	**16.55540**	**4.69627**	0	0	0	0	ok	ok	**0.45200**	ok	ok	**0.00785**	
	Other Inorganics															
	Ammoniacal Nitrogen	0.3	5	**510.69897**	**129.25515**	no sample	no sample	no sample	no sample	n/a	n/a	**no sample**	n/a	n/a	**no sample**	
	Cyanide	0.001	1	**1.70233**	**0.43085**	no sample	no sample	no sample	no sample	n/a	n/a	**no sample**	n/a	n/a	**no sample**	

Solid Samples

	Determinand	Calculated Cmg (mg/kg)		# samples above Cmg		% samples above Cmg (>33% samples highlighted purple)		Comparison to Cmg (mg/kg)		Max Sampled Value (< removed sheet)		Comparison to Cmg (mg/kg)		Average Sampled Value (< removed sheet)
		Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	Celtic Business Park	Residential Area	mo/ko	Celtic Business Park	Residential Area	mo/ko	
Solid Data	**Metals**													
	Arsenic	**11468.786**	**2902.688**	0	0	0	0	ok	ok	**80.5**	ok	ok	**11.1**	
	Cadmium	**330.591**	**83.661**	0	0	0	0	ok	ok	**15.1**	ok	ok	**1.3**	
	Chromium	**42699.080**	**10806.997**	0	0	0	0	ok	ok	**622.0**	ok	ok	**148.4**	
	Copper	**2042.252**	**516.883**	0	0	1	0.0	0.4	ok	Max Exceed	**1070.0**	ok	ok	**38.1**	
	Iron	**1379515.806**	**349148.010**	no sample	no sample	no sample	no sample	no sample	no sample	**no sample**	n/a	n/a	**no sample**	
	Lead	**71246.386**	**18032.071**	0	0	0	0	0	ok	ok	**1300.0**	ok	ok	**98.9**	
	Manganese	**150835.652**	**38175.690**	no sample	no sample	no sample	no sample	no sample	no sample	**no sample**	n/a	n/a	**no sample**	
	Mercury	**595.859**	**150.809**	0	0	0	0	0	ok	ok	**4.2**	ok	ok	**0.4**	
	Nickel	**52109.372**	**13188.601**	0	0	0	0	0	ok	ok	**77.3**	ok	ok	**24.6**	
	Selenium	**3177.881**	**804.305**	0	0	0	0	0	ok	ok	**33.8**	ok	ok	**8.9**	
	Vanadium	**7270.791**	**1840.196**	0	0	0	0	0.0	ok	ok	**890.0**	ok	ok	**215.1**	
	Zinc	**622690.141**	**157599.516**	0	0	0	0	0	ok	ok	**5700.0**	ok	ok	**319.3**	
	Other Inorganics													
	Ammoniacal Nitrogen	**699.276**	**176.993**	no sample	no sample	no sample	no sample	no sample	no sample	**no sample**	n/a	n/a	**no sample**	
	Cyanide	**9.149**	**2.313**	no sample	no sample	no sample	no sample	no sample	no sample	**no sample**	n/a	n/a	**no sample**	
	Organics													
	Benzene	**17.220**	**4.358**	0	0	0	0	0	ok	ok	**0.04**	ok	ok	**0.04**
	Toluene	**591.530**	**147.192**	0	0	0	0	0	ok	ok	**0.03**	ok	ok	**0.01**
	Ethylbenzene	**363.617**	**92.030**	0	0	0	0	0	ok	ok	**0.01**	ok	ok	**0.01**
	Xylene[5]	**335.724**	**84.970**	0	0	0	0	0	ok	ok	**0.03**	ok	ok	**0.01**
	Phenol	**13.816**	**3.497**	no sample	no sample	no sample	no sample	no sample	no sample	**no sample**	n/a	n/a	**no sample**	
	TPH Aliphatic >C5-C6	**330.563**	**83.664**	0	0	0	0	0	ok	ok	**0.10**	ok	ok	**0.04**
	TPH Aliphatic >C_6-C_8	**1626.370**	**411.626**	0	0	0	0	0	ok	ok	**0.15**	ok	ok	**0.04**
	TPH Aliphatic >C_8-C_{10}	**12960.726**	**3294.590**	0	0	0	0	0	ok	ok	**0.14**	ok	ok	**0.04**
	TPH Aliphatic >C_{10}-C_{12}	**192089.217**	**29839.230**	0	0	0	0	0	ok	ok	**0.53**	ok	ok	**0.05**
	TPH Aliphatic >C_{12}-C_{16}	**2036742.733**	**915488.601**	0	0	0	0	0	ok	ok	**37.2**	ok	ok	**3.5**
	TPH Aliphatic >C_{16}-C_{21}	**2564071382.283**	**64895263.779**	0	0	0	0	0	ok	ok	**184.0**	ok	ok	**20.7**
	TPH Aliphatic >C_{21}-C_{35}	**2564071382.283**	**64895263.779**	0	0	0	0	0	ok	ok	**5630.0**	ok	ok	**239.8**
	TPH Aliphatic >C35-C44	**2564071382.283**	**64895263.779**	0	0	0	0	0	ok	ok	**2460.0**	ok	ok	**67.2**
	TPH Aromatic >C_5-C_7	**38.530**	**9.752**	0	0	0	0	0	ok	ok	**0.04**	ok	ok	**0.04**
	TPH Aromatic >C_7-C_8	**801.839**	**202.890**	0	0	0	0	0	ok	ok	**0.04**	ok	ok	**0.04**
	TPH Aromatic >C_8-C_{10}	**650.327**	**164.594**	0	0	0	0	0	ok	ok	**0.10**	ok	ok	**0.04**
	TPH Aromatic >C_{10}-C_{12}	**1027.020**	**259.933**	0	0	0	0	0	ok	ok	**0.35**	ok	ok	**0.04**
	TPH Aromatic >C_{12}-C_{16}	**2042.955**	**517.061**	0	0	1	0	0	ok	Max Exceed	**786.0**	ok	ok	**5.3**
	TPH Aromatic >C_{16}-C_{21}	**6446.891**	**1631.673**	1	1	0	0	0	Max Exceed	Max Exceed	**7750.0**	ok	ok	**44.1**
	TPH Aromatic >C_{21}-C_{35}	**51166.143**	**12949.875**	0	0	0	0	0	ok	ok	**6660.0**	ok	ok	**118.3**
	TPH Aromatic >C35-C44	**51166.143**	**12949.875**	0	0	0	0	0	ok	ok	**725.0**	ok	ok	**48.5**
	TPH Aromatic >C40-C44	**51166.143**	**12949.875**	0	0	0	0	0	ok	ok	**253.0**	ok	ok	**18.0**
	Acenaphthene	**75.733**	**19.168**	0	1	0	0	0	ok	Max Exceed	**24.9**	ok	ok	**0.15**
	Acenaphthylene	**134.827**	**34.073**	0	0	0	0	0	ok	ok	**2.1**	ok	ok	**0.09**
	Anthracene	**154.563**	**39.119**	0	0	0	0	0	ok	ok	**5.3**	ok	ok	**0.27**
	Benzo(a)anthracene	**2747.512**	**695.380**	0	0	0	0	0	ok	ok	**37.6**	ok	ok	**1.02**
	Benzo(a)pyrene	**196.923**	**38.488**	0	1	0.0	0.4	ok	ok	Max Exceed	**42.5**	ok	ok	**1.15**
	Benzo(b)fluoranthene	**10.466**	**3.914**	2	17	0.8	7.0	Max Exceed	Max Exceed	Max Exceed	**54.5**	ok	ok	**1.60**
	Benzo(k)fluoranthene	**22.876**	**6.790**	0	1	0.0	0.4	ok	ok	Max Exceed	**19.6**	ok	ok	**0.57**
	Benzo(g,h,i)perylene	**60.170**	**15.229**	0	1	0.0	0.4	ok	ok	Max Exceed	**26.0**	ok	ok	**0.85**
	Chrysene	**2811.508**	**711.578**	0	0	0	0	0	ok	ok	**30.4**	ok	ok	**0.98**
	Di-benz(a,h)anthracene	**3792.598**	**959.886**	0	0	0	0	0	ok	ok	**8.4**	ok	ok	**0.23**
	Indeno(1,2,3-cd)pyrene	**114.651**	**29.018**	0	0	0	0	0.0	ok	ok	**24.7**	ok	ok	**0.72**
	Fluoranthene	**30.083**	**7.614**	1	7	0.4	2.9	Max Exceed	Max Exceed	Max Exceed	**40.7**	ok	ok	**1.61**
	Fluorene	**122.786**	**31.077**	0	0	0	0	0.0	ok	ok	**30.7**	ok	ok	**0.23**
	Naphthalene	**124.264**	**31.450**	0	0	0	0	0	ok	ok	**5.3**	ok	ok	**0.28**
	Phenanthrene	**122.786**	**31.077**	0	0	0	0	0.0	ok	ok	**19.6**	ok	ok	**0.86**
	Pyrene	**345.946**	**87.557**	0	0	0	0	0	ok	ok	**32.9**	ok	ok	**1.36**
	Tetrachloroethene (PCE)	**95.27633**	**24.11393**											
	Trichloroethene (TCE)	**57.46264**	**14.54348**											
	1,1-Dichloroethene (1,1-DCE)	**149.56105**	**37.85433**											
	cis-1,2-Dichloroethene (1,2-DCE)	**130.76387**	**33.09563**											
	trans-1,2-Dichloroethene	**128.01022**	**32.39870**											
	Vinyl Chloride (VC)	**1.32973**	**0.33655**											

Conversion from mg/l to mg/kg

	Determinand	Henrys Law Coefficient		Henrys Law ref	foc	koc	koc ref	Kd (average values)	Kd ref	Air Filled Porosity	Water Filled Porosity	Dry Bulk Density	Cgw (mg/kg) Celtic Business Park	Cgw (mg/kg) Residential Area	WQS (mg/kg)
	Metals														
	Arsenic	1	-					134	11	0.00368553	0.50	1.36	11468.79	2902.69	6.74
	Cadmium	1	-					776	11	0.00368553	0.50	1.36	330.55	83.66	0.19
	Chromium	1	-					5336	11	0.00368553	0.50	1.36	42699.08	10806.91	25.08
	Copper	1	-					1199	11	0.00368553	0.50	1.36	2042.25	516.88	1.20
	Iron	1	-					810	19	0.00368553	0.50	1.36	1379515.81	349148.01	810.37
	Lead	1	-					34877	11	0.00368553	0.50	1.36	71246.37	18032.07	41.85
	Manganese	1	-					720	19	0.00368553	0.50	1.36	150835.65	38175.69	88.61
	Mercury	1	-					5000	11	0.00368553	0.50	1.36	595.86	150.81	0.35
	Nickel	1	-					7652	11	0.00368553	0.50	1.36	52109.37	13188.60	30.61
	Selenium	1	-					186	11	0.00368553	0.50	1.36	3177.88	804.30	1.87
	Vanadium	1	-					213	11	0.00368553	0.50	1.36	7270.79	1840.20	4.27
	Zinc	1	-					33558	11	0.00368553	0.50	1.36	622690.14	157599.52	365.79
													0.00	0.00	0.00
	Ammoniacal Nitrogen	1	-						19	0.00368553	0.50	1.36	699.28	176.99	0.41
	Cyanide	1	-					6	20	0.00368553	0.50	1.36	9.14	2.31	0.01
													0.00	0.00	0.00
	Benzene	0.182000	12	0.0239		27	19	0.6445396622	koc*foc	0.00368553	0.50	1.36	17.22	4.36	0.01
	Toluene	0.22100	12	0.0239		178	12	4.249184458	koc*foc	0.00368553	0.50	1.36	581.53	147.19	0.32
	Ethylbenzene	0.3	12	0.0239		432	12	10.31263716	koc*foc	0.00368553	0.50	1.36	363.62	92.03	0.21
	Xylene[5]	0.22	12	0.0239		260	19	6.20667977	koc*foc	0.00368553	0.50	1.36	335.72	84.97	0.19
	Phenol	0.000068	12	0.0239		28.8	12	0.687309144	koc*foc	0.00368553	0.50	1.36	13.82	3.50	0.01
													0.00	0.00	0.00
	TPH Aliphatic >C5-C6	33.000000	13	0.0239		794	14	19.0	koc*foc	0.00368553	0.50	1.36	330.56	83.66	0.31
	TPH Aliphatic >C_6-C_8	50	13	0.0239		3981	14	95.0	koc*foc	0.00368553	0.50	1.36	1626.37	411.63	1.13
	TPH Aliphatic >C_8-C_{10}	80	13	0.0239		31623	14	754.9	koc*foc	0.00368553	0.50	1.36	12960.73	3294.59	7.84
	TPH Aliphatic >C_{10}-C_{12}	120	13	0.0239		251189	14	5996.3	koc*foc	0.00368553	0.50	1.36	192089.22	29839.23	60.41
	TPH Aliphatic >C_{12}-C_{16}	520	13	0.0239		5011872	14	119642.6	koc*foc	0.00368553	0.50	1.36	2036742.73	915488.60	1198.35
	TPH Aliphatic >C_{16}-C_{21}	4900	13	0.0239		63095744	14	1506216.1	koc*foc	0.00368553	0.50	1.36	25640718.28	64895263.78	########
	TPH Aliphatic >C_{21}-C_{35}	4900	13	0.0239		63095744	14	1506216.1	koc*foc	0.00368553	0.50	1.36	25640718.28	64895263.78	########
	TPH Aliphatic >C35-C44	4900	13	0.0239		63095744	14	1506216.1	koc*foc	0.00368553	0.50	1.36	25640718.28	64895263.78	########
	TPH Aromatic >C_5-C_7	0.23	13	0.0239		79	19	1.9	koc*foc	0.00368553	0.50	1.36	38.53	9.75	0.02
	TPH Aromatic >C_7-C_8	0.27	13	0.0239		251	19	6.0	koc*foc	0.00368553	0.50	1.36	801.84	202.89	0.45
	TPH Aromatic >C_8-C_{10}	0.48	13	0.0239		1585	14	37.8	koc*foc	0.00368553	0.50	1.36	650.33	164.59	0.38
	TPH Aromatic >C_{10}-C_{12}	0.14	13	0.0239		2512	14	60.0	koc*foc	0.00368553	0.50	1.36	1027.02	259.93	0.60
	TPH Aromatic >C_{12}-C_{16}	0.05	13	0.0239		5012	14	119.6	koc*foc	0.00368553	0.50	1.36	2042.95	517.06	1.20
	TPH Aromatic >C_{16}-C_{21}	0.01	13	0.0239		15849	14	378.3	koc*foc	0.00368553	0.50	1.36	6446.89	1631.67	3.78
	TPH Aromatic >C_{21}-C_{35}	0.00067	13	0.0239		125893	14	3005.3	koc*foc	0.00368553	0.50	1.36	51166.14	12949.87	30.05
	TPH Aromatic >C35-C44	0.00067	13	0.0239		125893	14	3005.3	koc*foc	0.00368553	0.50	1.36	51166.14	12949.87	30.05
	TPH Aromatic >C40-C44	0.00067	13	0.0239		125893	14	3005.3	koc*foc	0.00368553	0.50	1.36	51166.14	12949.87	30.05
													0.00	0.00	0.00
	Acenaphthene	0.0049	12	0.0239		18621	16	444.5	koc*foc	0.00368553	0.50	1.36	75.73	19.17	0.04
	Acenaphthylene	0.0034	12	0.0239		33113	16	790.5	koc*foc	0.00368553	0.50	1.36	134.63	34.07	0.08
	Anthracene	0.0016	12	0.0239		38019	16	907.6	koc*foc	0.00368553	0.50	1.36	154.56	39.12	0.09
	Benzo(a)anthracene	0.00024	12	0.0239		676083	16	16139.3	koc*foc	0.00368553	0.50	1.36	2747.51	695.38	1.61
	Benzo(a)pyrene	0.000019	12	0.0239		426580	16	10185.2	koc*foc	0.00368553	0.50	1.36	196.82	38.49	0.09
	Benzo(b)fluoranthene	0.0002	12	0.0239		2238721	16	53442.4	koc*foc	0.00368553	0.50	1.36	15.47	3.91	0.01
	Benzo(k)fluoranthene	0.000034	12	0.0239		3311311	16	79047.1	koc*foc	0.00368553	0.50	1.36	22.88	5.79	0.01
	Benzo(g,h,i)perylene	0.00003	12	0.0239		8709636	16	207915.1	koc*foc	0.00368553	0.50	1.36	60.17	15.23	0.04
	Chrysene	0.000026	12	0.0239		691831	16	16515.3	koc*foc	0.00368553	0.50	1.36	2811.51	711.58	1.65
	Di-benz(a,h)anthracene	0.00000606	12	0.0239		933254	16	22278.5	koc*foc	0.00368553	0.50	1.36	3792.60	959.89	2.23
	Indeno(1,2,3-cd)pyrene	0.000066	12	0.0239		16595869	16	396174.0	koc*foc	0.00368553	0.50	1.36	114.65	29.02	0.07
	Fluoranthene	0.00042	12	0.0239		117490	16	2804.7	koc*foc	0.00368553	0.50	1.36	30.08	7.61	0.02
	Fluorene	0.0032	12	0.0239		30200	16	720.9	koc*foc	0.00368553	0.50	1.36	122.79	31.08	0.07
	Naphthalene	0.017	12	0.0239		1514	16	36.1	koc*foc	0.00368553	0.50	1.36	124.26	31.45	0.07
	Phenanthrene	0.0013	12	0.0239		30200	16	720.9	koc*foc	0.00368553	0.50	1.36	122.79	31.08	0.07
	Pyrene	0.00037	12	0.0239		85114	16	2031.8	koc*foc	0.00368553	0.50	1.36	345.95	87.56	0.20
													0.00	0.00	0.00
	Tetrachloroethene (PCE)	0.865	17	0.0239		219	16	5.2	koc*foc	0.00368553	0.50	1.36	95.28	24.11	0.06
	Trichloroethene (TCE)	0.42	17	0.0239		126	16	3.0	koc*foc	0.00368553	0.50	1.36	57.46	14.54	0.03
	1,1-Dichloroethene (1,1-DCE)	1.536	17	0.0239		107.5	16	2.6	koc*foc	0.00368553	0.50	1.36	149.56	37.85	0.09
	cis-1,2-Dichloroethene (1,2-DCE)	0.2772	17	0.0239		48.97	16	1.2	koc*foc	0.00368553	0.50	1.36	130.76	33.10	0.08
	trans-1,2-Dichloroethene	0.4071	17	0.0239		47.6	16	1.1	koc*foc	0.00368553	0.50	1.36	128.01	32.40	0.08
	Vinyl Chloride (VC)	0.79	17	0.0239		50	16	1.2	koc*foc	0.00368553	0.50	1.36	1.33	0.34	0.00

Appendix G: Water Testing Certificates

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

UKAS TESTING
2183

Final Report

Report No.:	23-18950-1
Initial Date of Issue:	15-Jun-2023
Re-Issue Details:	
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.:	Q23-30306
Order No.:	132306
No. of Samples:	6
Turnaround (Wkdays):	5
Date Approved:	15-Jun-2023
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	06-Jun-2023
Date Instructed:	06-Jun-2023
Results Due:	12-Jun-2023

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		23-18950	23-18950	23-18950	23-18950	23-18950	23-18950
Quotation No.: Q23-30306			**Chemtest Sample ID.:**		1651626	1651627	1651628	1651629	1651630	1651631
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07	5e1-WS08	5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER
			Date Sampled:		05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
pH	U	1010		N/A	11.3	9.6	12.3	11.7	11.5	10.4
Electrical Conductivity	U	1020	µS/cm	1.0	1300	1500	3900	1300	1200	990
Suspended Solids At 105C	U	1030	mg/l	5.0	< 5.0	8.0	< 5.0	24	9.0	69
Total Dissolved Solids	N	1020	mg/l	1.0	820	1000	2500	830	800	640
Turbidity	N	1060	NTU	1.0	9.5	4.5	1.9	13	9.4	7.6
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	34	7.0	6.0	7.0	5.0	11
Chemical Oxygen Demand	U	1100	mg O2/l	10	170	130	190	36	41	73
Dissolved Oxygen	N	1150	mg O2/l	0.50	9.5	9.5	9.6	9.5	9.4	9.1
Redox Potential	N	1170	mV	N/A	-68	-91	-280	-220	-180	-110
Chloride	U	1220	mg/l	1.0	72	130	90	48	51	24
Fluoride	U	1220	mg/l	0.050	0.58	0.67	0.97	0.29	0.34	0.60
Ammonia (Free)	N	1220	mg/l	0.050	13	8.1	18	7.7	6.7	5.6
Ammonia (Free) as N	N	1220	mg/l	0.050	13	8.1	18	7.7	6.7	5.6
Ammonium	U	1220	mg/l	0.050	0.15	4.6	< 0.050	< 0.050	0.052	< 0.050
Ammoniacal Nitrogen	U	1220	mg/l	0.050	13	12	18	7.8	6.8	6.0
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)	N	1220	mg/l	0.020	0.021	0.025	0.021	0.020	0.021	0.020
Sulphur	N	1220	mg/l	1.0	130	220	13	67	110	140
Sulphate	U	1220	mg/l	1.0	380	650	39	200	340	430
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	mg/l	0.050	0.054	< 0.050	1.3	< 0.050	< 0.050	< 0.050
Calcium (Dissolved)	U	1455	mg/l	2.00	200	260	370	130	160	170
Magnesium (Dissolved)	U	1455	mg/l	0.20	< 0.20	5.4	< 0.20	< 0.20	< 0.20	0.41
Calcium (Total)	N	1455	mg/l	5.0	250	340	460	160	200	220
Magnesium (Total)	N	1455	mg/l	0.50	< 0.50	8.7	< 0.50	< 0.50	< 0.50	0.77
Total Hardness as CaCO3	U	1270	mg/l	15	510	680	920	320	390	430
Arsenic (Dissolved)	U	1455	µg/l	0.20	46	21	29	19	17	19
Boron (Dissolved)	U	1455	µg/l	10.0	41	160	20	22	40	87
Barium (Dissolved)	U	1455	µg/l	5.00	49	60	700	66	79	56
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Copper (Dissolved)	U	1455	µg/l	0.50	0.65	0.56	< 0.50	2.4	1.2	3.5
Iron (Dissolved)	N	1455	µg/l	5.0	27	57	< 5.0	12	63	45
Mercury (Dissolved)	U	1455	µg/l	0.05	0.08	< 0.05	0.06	< 0.05	0.09	0.11
Manganese (Dissolved)	U	1455	µg/l	0.50	1.1	48	0.61	0.84	< 0.50	1.2
Nickel (Dissolved)	U	1455	µg/l	0.50	19	8.6	48	12	10	13

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			Chemtest Job No.:		23-18950	23-18950	23-18950	23-18950	23-18950	23-18950
Quotation No.: Q23-30306			Chemtest Sample ID.:		1651626	1651627	1651628	1651629	1651630	1651631
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07	5e1-WS08	5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER
			Date Sampled:		05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	0.51	< 0.50	0.74	< 0.50	1.2
Antimony (Dissolved)	U	1455	µg/l	0.50	< 0.50	0.73	< 0.50	< 0.50	0.70	1.3
Selenium (Dissolved)	U	1455	µg/l	0.50	4.6	1.1	4.5	6.0	5.9	3.7
Vanadium (Dissolved)	U	1455	µg/l	0.50	25	11	2.2	44	65	36
Zinc (Dissolved)	U	1455	µg/l	2.5	< 2.5	6.0	5.8	6.7	7.7	3.8
Arsenic (Total)	N	1455	µg/l	0.20	60	27	36	23	22	25
Boron (Total)	N	1455	µg/l	10.0	54	230	31	27	54	120
Barium (Total)	N	1455	µg/l	5.00	65	86	890	84	100	86
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	0.68	4.0	3.0	0.55	1.1	1.5
Copper (Total)	N	1455	µg/l	0.50	5.2	7.1	4.9	7.1	7.0	12
Iron (Total)	N	1455	µg/l	5.0	150	2400	930	140	1200	730
Mercury (Total)	N	1455	µg/l	0.05	0.12	0.10	0.07	0.09	0.15	0.22
Manganese (Total)	N	1455	µg/l	0.50	2.8	110	7.6	3.6	7.7	41
Nickel (Total)	N	1455	µg/l	0.50	22	11	57	14	13	17
Lead (Total)	N	1455	µg/l	0.50	2.1	2.4	1.2	3.1	2.9	11
Antimony (Total)	N	1455	µg/l	0.50	0.62	1.0	< 0.50	< 0.50	0.86	1.9
Selenium (Total)	N	1455	µg/l	0.50	6.2	2.6	6.5	7.8	5.6	5.2
Vanadium (Total)	N	1455	µg/l	0.50	33	14	7.4	56	83	48
Zinc (Total)	N	1455	µg/l	2.5	37	75	26	13	37	150
Chromium (Hexavalent)	U	1490	µg/l	20	< 20	< 20	< 20	< 20	< 20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	63	52	90	15	16	29
Total Inorganic Carbon	N	1220	mg/l	2.5	23	22	130	24	18	13
Total Organic Carbon	U	1610	mg/l	2.0	63	55	87	16	16	31
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	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.:**		23-18950	23-18950	23-18950	23-18950	23-18950	23-18950
Quotation No.: Q23-30306			**Chemtest Sample ID.:**		1651626	1651627	1651628	1651629	1651630	1651631
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07	5e1-WS08	5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER	WATER	WATER	WATER	WATER
			Date Sampled:		05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023	05-Jun-2023
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	U	1800	µg/l	0.10	1.3	22	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10	3.2	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0	28	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	0.57	< 0.030	2.1	< 0.030	< 0.030	0.057

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
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.

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.:	22-39767-1
Initial Date of Issue:	02-Nov-2022
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.:	PO115623
No. of Samples:	3
Turnaround (Wkdays):	10
Date Approved:	02-Nov-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	18-Oct-2022
Date Instructed:	18-Oct-2022
Results Due:	31-Oct-2022

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39767	22-39767	22-39767
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
pH	U	1010		N/A	9.3	9.9	10.0
Electrical Conductivity	U	1020	µS/cm	1.0	1600	2500	2500
Suspended Solids At 105C	U	1030	mg/l	5.0	60	120	17
Total Dissolved Solids	N	1020	mg/l	1.0	1000	1600	1700
Turbidity	N	1060	NTU	1.0	22	22	8.9
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	21	8.0	5.0
Chemical Oxygen Demand	U	1100	mg O2/l	10	280	130	49
Dissolved Oxygen	N	1150	mg O2/l	0.50	5.4	6.8	6.8
Redox Potential	N	1170	mV	N/A	0.000	0.000	0.000
Chloride	U	1220	mg/l	1.0	120	200	87
Fluoride	U	1220	mg/l	0.050	0.43	0.43	0.64
Ammonia (Free)	N	1220	mg/l	0.050	5.0	8.3	6.5
Ammonia (Free) as N	N	1220	mg/l	0.050	5.0	8.3	6.5
Ammonium	U	1220	mg/l	0.050	5.6	2.3	1.5
Ammoniacal Nitrogen	U	1220	mg/l	0.050	9.3	10	7.7
Phosphorus (Dissolved)	N	1220	mg/l	0.020	0.023	0.021	0.025
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.023	0.021	0.024
Sulphur	N	1220	mg/l	1.0	260	430	20
Sulphate	U	1220	mg/l	1.0	770	1300	61
Cyanide (Total)	U	1300	mg/l	0.050	0.080	0.060	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	0.79	< 0.50	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	0.080	0.060	< 0.050
Sulphide	U	1325	mg/l	0.050	< 0.050	< 0.050	2.4
Calcium (Dissolved)	U	1455	mg/l	2.00	380	680	13
Magnesium (Dissolved)	U	1455	mg/l	0.20	1.6	1.3	< 0.20
Calcium (Total)	N	1455	mg/l	5.0	370	660	260
Magnesium (Total)	N	1455	mg/l	0.50	0.54	1.3	< 0.50
Total Hardness as CaCO3	U	1270	mg/l	15	950	1700	32
Arsenic (Dissolved)	U	1455	µg/l	0.20	70	29	20
Boron (Dissolved)	U	1455	µg/l	10.0	110	120	11
Barium (Dissolved)	U	1455	µg/l	5.00	70	110	170
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Copper (Dissolved)	U	1455	µg/l	0.50	5.7	4.6	< 0.50
Iron (Dissolved)	N	1455	µg/l	5.0	61	46	< 5.0
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05	< 0.05	0.31
Manganese (Dissolved)	U	1455	µg/l	0.50	5.7	3.3	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39767	22-39767	22-39767
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Nickel (Dissolved)	U	1455	µg/l	0.50	33	9.1	15
Lead (Dissolved)	U	1455	µg/l	0.50	1.3	< 0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	2.1	1.4	< 0.50
Selenium (Dissolved)	U	1455	µg/l	0.50	5.8	6.4	10
Vanadium (Dissolved)	U	1455	µg/l	0.50	15	59	3.3
Zinc (Dissolved)	U	1455	µg/l	2.5	3.6	3.0	< 2.5
Arsenic (Total)	N	1455	µg/l	0.20	71	31	21
Boron (Total)	N	1455	µg/l	10.0	120	140	20
Barium (Total)	N	1455	µg/l	5.00	67	120	620
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0	< 1.0	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	2.9	2.3	5.9
Copper (Total)	N	1455	µg/l	0.50	9.3	7.6	1.0
Iron (Total)	N	1455	µg/l	5.0	150	120	17
Mercury (Total)	N	1455	µg/l	0.05	0.13	0.14	0.32
Manganese (Total)	N	1455	µg/l	0.50	9.2	9.4	1.4
Nickel (Total)	N	1455	µg/l	0.50	34	9.0	16
Lead (Total)	N	1455	µg/l	0.50	7.5	1.4	< 0.50
Antimony (Total)	N	1455	µg/l	0.50	4.9	3.9	2.3
Selenium (Total)	N	1455	µg/l	0.50	8.5	8.4	12
Vanadium (Total)	N	1455	µg/l	0.50	38	54	14
Zinc (Total)	N	1455	µg/l	2.5	4.8	15	< 2.5
Chromium (Hexavalent)	U	1490	µg/l	20	< 20	< 20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	130	71	15
Total Inorganic Carbon	N	1220	mg/l	2.5	24	24	50
Total Organic Carbon	U	1610	mg/l	2.0	130	72	14
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39767	22-39767	22-39767
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5	< 5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5	< 5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5	< 5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5	< 5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental		**Chemtest Job No.:**			22-39767	22-39767	22-39767
Quotation No.: Q22-28243		**Chemtest Sample ID.:**			1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39767	22-39767	22-39767
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Naphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39767	22-39767	22-39767
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1527137	1527138	1527139
			Client Sample ID.:		5e1-WS05	5e1-WS06	5e1-WS07
			Sample Type:		WATER	WATER	WATER
			Date Sampled:		17-Oct-2022	17-Oct-2022	17-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10	0.63	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030	< 0.030	0.31

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.

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.:	22-39560-1
Initial Date of Issue:	28-Oct-2022
Client	Rodgers Leask Environmental
Client Address:	Office 225 2430/2440 Aztec West Almoundsbury Bristol BS32 4AQ
Contact(s):	Caitlin Davies Chris Wilson David McCarroll
Project	P18-669
Quotation No.:	Q22-28243
Order No.:	PO115623
No. of Samples:	2
Turnaround (Wkdays):	10
Date Approved:	28-Oct-2022
Approved By:	
Details:	Stuart Henderson, Technical Manager

Date Received:	17-Oct-2022
Date Instructed:	17-Oct-2022
Results Due:	28-Oct-2022

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
pH	U	1010		N/A	6.9	7.8
Electrical Conductivity	U	1020	µS/cm	1.0	7200	3000
Suspended Solids At 105C	U	1030	mg/l	5.0	130	29
Total Dissolved Solids	N	1020	mg/l	1.0	4700	2000
Turbidity	N	1060	NTU	1.0	240	18
Biochemical Oxygen Demand	N	1090	mg O2/l	4.0	[B] < 4.0	[B] 10
Chemical Oxygen Demand	U	1100	mg O2/l	10	71	130
Dissolved Oxygen	N	1150	mg O2/l	0.50	7.7	7.6
Redox Potential	N	1170	mV	N/A	-180	-81
Chloride	U	1220	mg/l	1.0	160	90
Fluoride	U	1220	mg/l	0.050	0.92	0.62
Ammonia (Free)	N	1220	mg/l	0.050	< 0.050	0.43
Ammonia (Free) as N	N	1220	mg/l	0.050	< 0.050	0.43
Ammonium	U	1220	mg/l	0.050	7.3	17
Ammoniacal Nitrogen	U	1220	mg/l	0.050	5.7	14
Phosphorus (Dissolved)	N	1220	mg/l	0.020	0.021	0.023
Phosphate	U	1220	mg/l	0.200	< 0.20	< 0.20
Phosphorus (Dissolved)	U	1220	mg/l	0.020	0.021	0.022
Sulphur	N	1220	mg/l	1.0	220	210
Sulphate	U	1220	mg/l	1.0	670	630
Cyanide (Total)	U	1300	mg/l	0.050	0.15	0.090
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050
Thiocyanate	U	1300	mg/l	0.50	0.56	< 0.50
Cyanide (Complex)	U	1300	mg/l	0.050	0.15	0.090
Sulphide	U	1325	mg/l	0.050	[B] < 0.050	[B] < 0.050
Calcium (Dissolved)	U	1455	mg/l	2.00	290	260
Magnesium (Dissolved)	U	1455	mg/l	0.20	0.50	14
Calcium (Total)	N	1455	mg/l	5.0	320	260
Magnesium (Total)	N	1455	mg/l	0.50	0.53	14
Total Hardness as CaCO3	U	1270	mg/l	15	720	700
Arsenic (Dissolved)	U	1455	µg/l	0.20	21	25
Boron (Dissolved)	U	1455	µg/l	10.0	170	280
Barium (Dissolved)	U	1455	µg/l	5.00	99	110
Beryllium (Dissolved)	U	1455	µg/l	1.00	< 1.0	< 1.0
Cadmium (Dissolved)	U	1455	µg/l	0.11	< 0.11	< 0.11
Chromium (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50
Copper (Dissolved)	U	1455	µg/l	0.50	2.4	15
Iron (Dissolved)	N	1455	µg/l	5.0	75	490
Mercury (Dissolved)	U	1455	µg/l	0.05	< 0.05	< 0.05
Manganese (Dissolved)	U	1455	µg/l	0.50	1.6	310

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Nickel (Dissolved)	U	1455	µg/l	0.50	10	10
Lead (Dissolved)	U	1455	µg/l	0.50	< 0.50	< 0.50
Antimony (Dissolved)	U	1455	µg/l	0.50	0.62	5.1
Selenium (Dissolved)	U	1455	µg/l	0.50	11	12
Vanadium (Dissolved)	U	1455	µg/l	0.50	110	44
Zinc (Dissolved)	U	1455	µg/l	2.5	4.3	7.7
Arsenic (Total)	N	1455	µg/l	0.20	23	26
Boron (Total)	N	1455	µg/l	10.0	160	260
Barium (Total)	N	1455	µg/l	5.00	110	100
Beryllium (Total)	N	1455	µg/l	1.00	< 1.0	< 1.0
Cadmium (Total)	N	1455	µg/l	0.11	< 0.11	< 0.11
Chromium (Total)	N	1455	µg/l	0.50	1.2	1.2
Copper (Total)	N	1455	µg/l	0.50	3.6	17
Iron (Total)	N	1455	µg/l	5.0	320	1600
Mercury (Total)	N	1455	µg/l	0.05	0.17	0.07
Manganese (Total)	N	1455	µg/l	0.50	25	310
Nickel (Total)	N	1455	µg/l	0.50	10	9.3
Lead (Total)	N	1455	µg/l	0.50	1.1	1.3
Antimony (Total)	N	1455	µg/l	0.50	4.2	5.8
Selenium (Total)	N	1455	µg/l	0.50	15	9.7
Vanadium (Total)	N	1455	µg/l	0.50	140	73
Zinc (Total)	N	1455	µg/l	2.5	4.0	3.6
Chromium (Hexavalent)	U	1490	µg/l	20	< 20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	23	47
Total Inorganic Carbon	N	1220	mg/l	2.5	14	38
Total Organic Carbon	U	1610	mg/l	2.0	22	47
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0
Bromomethane	U	1760	µg/l	5	< 5	< 5
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromochloromethane	U	1760	µg/l	5	< 5	< 5
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5	< 5	< 5
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5	< 5	< 5
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Naphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50

Results - Water

Project: P18-669

Client: Rodgers Leask Environmental			**Chemtest Job No.:**		22-39560	22-39560
Quotation No.: Q22-28243			**Chemtest Sample ID.:**		1526123	1526124
			Client Sample ID.:		5e1-WS01	5e1-WS03
			Sample Type:		WATER	WATER
			Date Sampled:		14-Oct-2022	14-Oct-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Naphthalene	U	1800	µg/l	0.10	< 0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 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:
1526123		5e1-WS01		14-Oct-2022	B	Coloured Winchester 1000ml
1526123		5e1-WS01		14-Oct-2022	B	EPA Vial 40ml
1526123		5e1-WS01		14-Oct-2022	B	Plastic Bottle 1000ml
1526124		5e1-WS03		14-Oct-2022	B	Coloured Winchester 1000ml
1526124		5e1-WS03		14-Oct-2022	B	EPA Vial 40ml
1526124		5e1-WS03		14-Oct-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.

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

Appendix H: Permeability

Project: P18-669

Phase 5e1

Test 1 (5E1-INF-1) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	235	0	-	-
3	225	10	3.333333333	5.55556E-05
13	206	29	2.230769231	3.71795E-05
28	206	29	1.035714286	1.72619E-05
570	158	77	0.14	2.25E-06
1510	149	86	0.06	9.49E-07

Test 2 (5E1-INF 2) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	212	0	-	-
13	135	77	5.923076923	9.87179E-05
40	133	79	1.98	3.29E-05
667	131	81	0.12	2.02E-06
1416	130	82	0.06	9.65E-07

Test 3 (INF-3) - 09/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	120	0	-	-
28	100	20	0.714285714	1.19048E-05
585	90	30	0.051282051	8.54701E-07

Test 4 (5E1-1NF-4) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	172	0	-	-
15	153	19	1.27	2.11E-05
27	153	19	0.70	1.17E-05
37	153	19	0.51	8.56E-06
126	138	34	0.27	4.50E-06
187	135	37	0.20	3.30E-06
244	135	37	0.15	2.53E-06
856	121	51	0.06	9.93E-07

Test 5 (5E1-1NF-5) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	215	0	-	-
69	182	33	0.48	7.97E-06
129	159	56	0.43	7.24E-06
185	140.5	74.5	0.40	6.71E-06
1335	140	75	0.06	9.36E-07

Test 6 (5E1-1NF-6) - 10/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	177	0	-	-
69	128	44	0.64	1.06E-05
128	115	57	0.45	7.42E-06
185	115	57	0.31	5.14E-06
1235	107	65	0.05	8.77E-07

Test 7 (5E1-INF-7) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	139	0	-	-
18	137	2	0.11	1.85E-06
50	135	4	0.08	1.33E-06
93	131	8	0.09	1.43E-06
148	129	10	0.07	1.13E-06
1302	69	70	0.05	8.96E-07

Test 8 (5E1-INF-8) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	154	0	-	-
10	146	8	0.80	1.33E-05
41	131	23	0.56	9.35E-06
87	115	39	0.45	7.47E-06
142	102	52	0.37	6.10E-06
1296	89	65	0.05	8.36E-07

Test 9 (5E1-INF-9) - 14/08/2023				
Time (m)	Water level (mm)	Difference from start (mm)	Permeability (mm/min)	Permeability (m/s)
0	130	0	-	-
10	129	0	0.00	0.00E+00
40	123	6	0.15	2.50E-06
83	118	11	0.13	2.21E-06
138	112	17	0.12	2.05E-06
1292	92	37	0.03	4.77E-07

Appendix I: DQCWRA Validation Plan

Technical Note

Project:	P18-669 Glan Llyn, Newport
Subject:	CWDQRA Validation Plan
Date:	June 2022
Document Reference:	18669-RLL-22-XX-RP-O-0260
Prepared by	Chris Wilson BSc (Hons) MCIWEM
Reviewed by	Howel Morris BSc (Hons) MSc CGeol FGS

A site wide Remediation Strategy was submitted by Rodgers Leask Limited (RLL) in November 2021 for the Glan Llyn development in Newport pursuant to the sitewide discharge of part of condition 27 of the outline planning approval 06/0471. Natural Resources Wales (NRW) reviewed the strategy and the appended updated controlled water detailed quantitative risk assessment (CWDQRA). A meeting was held with NRW on 20th April 2022 and following the meeting RLL has prepared this CWDQRA validation plan to verify that material with contaminants of concern exceeding the criteria are placed at the appropriate distance from a surface water, to assess whether the hydraulic conductivity and the pore water chemical concentrations within the reengineered material are as assumed in the CWDQRA. This note provides the method to collect and assess the CWDQRA validation information as an addendum to the remediation strategy and also presents a number of points as a continency plan.

Contaminants of Concern Validation

The updated CWDQRA identified some exceedances for concentrations of contaminants of concern (CoC) in relation to a 20m compliance distance. A further assessment has shown material recording concentrations exceeding the 20m compliance criteria for the CoC is suitable when placed at a distance of greater than 30m from the compliance point. The phase specific validation report will show that material with CoC exceeding the 20m compliance criteria has been placed at a suitable distance i.e. greater than 30m.

Hydraulic Conductivity Validation

The updated CWDQRA recognises the benefits of excavating and reengineering the made ground on the permeability of the material. The earthworks validation report presents test results characterising the made ground and standard results for compaction and air voids validating that the compaction requirements have been achieved. It is considered helpful, as a line of evidence to support the poor drainage characterisation of the reengineered material, to undertake falling head tests, and where possible rising head tests, upon and within the reengineered material.

The formation falling head tests are to be undertaken using a cylinder to hold a head of water against the formation surface. Approximately 10 falling head tests will be undertaken per phase or a minimum of 1 test per 100m^2. Whilst the dimensions of the falling head test are not

complaint with BRE Soakaway test, the monitoring and assessment will be undertaken in accordance with the BRE. The standard dimensions of the BRE Soakaway test would damage the formation and potentially be influenced by the underlying clay.

The falling and rising head tests will be undertaken on the shallow monitoring wells installed, following the earthworks, in the reengineered made ground. Up to 8 shallow monitoring locations will be installed in each phase.

The CWDQRA describes the permeability of piling mat post construction. The validation report shall include, as part of the developer obligations, confirmation or verification of construction material/ piling mat with the suitable permeability characteristics in accordance with the CWDQRA & Remediation Strategy.

Pore Water Concentration Assessment

The updated DQCWRA assumed pore water concentrations as shown in Table 1.

Table 1. Calculated Pore-water Concentrations for Contaminants of Concern (CoC) Modelled in P20 Remedial Target Worksheets

Determinands	**Calculated Porewater Concentrations (mg/l) based upon laboratory derived totals soil concentrations (mg/kg) and 1806 (No.) Soil Samples**		
	Average	Upper 95 % Percentile	Maximum
Iron	113.57	314.67	2949.27
Manganese	12.00	44.70	566.00
Vanadium	0.97	3.01	13.498
Benzo(a)pyrene	2.85E-4	0.00113	0.07
Benzo(b)fluoranthene	0.0767	0.28	20.77
Naphthalene	0.231	0.165	128.68

It is intended, as part of the validation, to then compare the field chemical concentrations with the pore water concentrations adopted within the CWDQRA. This will only be possible where perched water is encountered. Where water is present within the shallow monitoring wells the sample will be collected using a peristaltic (low flow) pump.

The monitoring locations, the positions of the formation surface tests falling head tests, the results and the assessment of the results will be presented in the validation report for each phase.

Following validation of the earthworks to achieve the formation surface, it is proposed that a limited number of monitoring wells are retained (approximately 30% or 3 per phase) or

installed in landscaping areas. The validation report for each phase will contain specific information on how this will be achieved. This will allow long-term monitoring of the perched water post construction and build on a sitewide dataset of perched water quality.

Contingency Plan

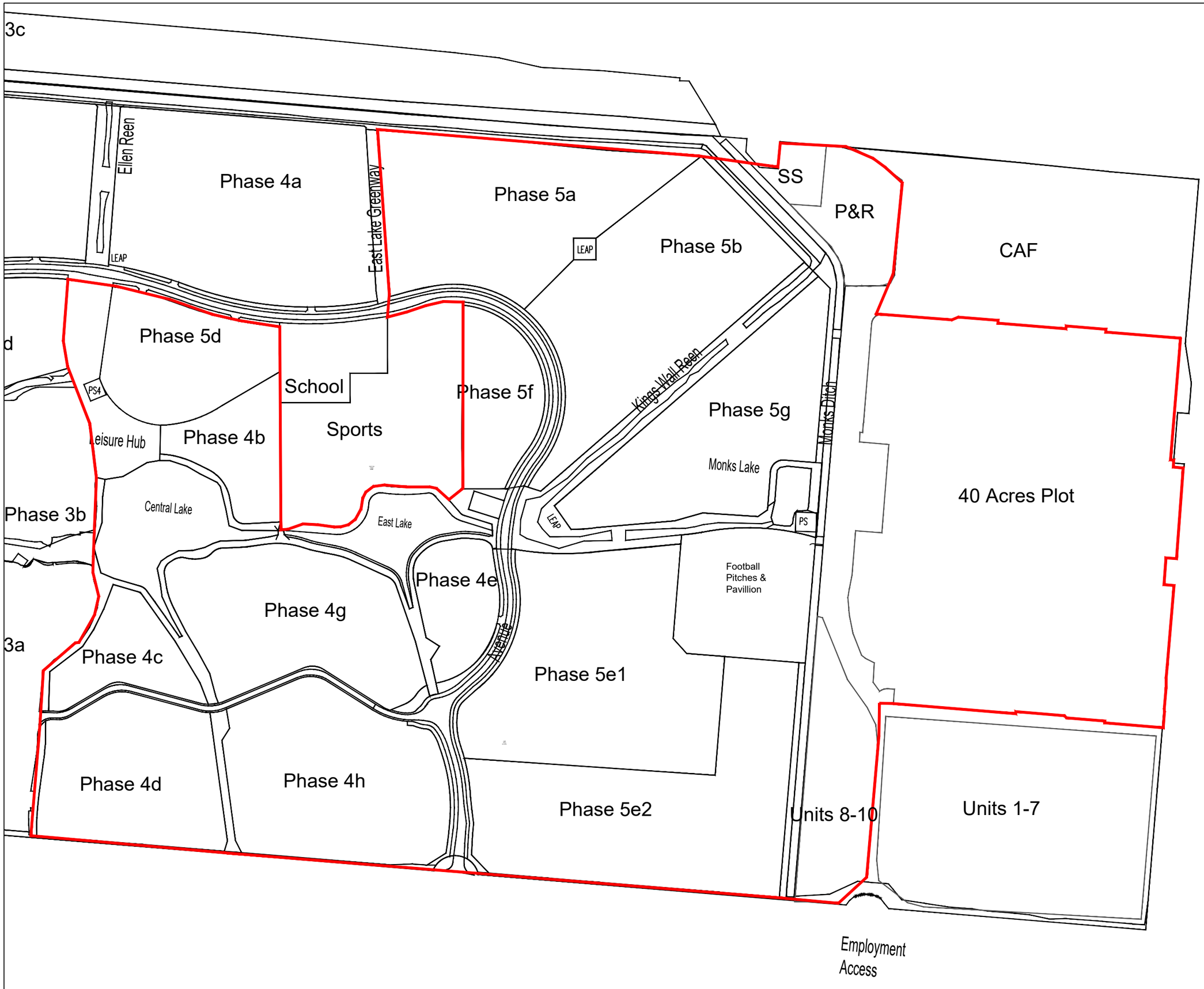
The validation assessment will also, where appropriate, compare results from adjacent phases and site wide monitoring results as part of the validation assessment. The creation of baseline set of data for the site, through the accumulation of results from individual phases, to support the maintenance of suitable site wide surface water quality. The comparison of phase specific information and sitewide information may also be used as contingency where soil concentrations exceed criteria or pore water concentrations exceed modelled parameters but monitoring indicates suitable sitewide conditions.

The CWDQRA also considers that there is a potential for natural attenuation benefits from further improving the existing surface water features on the site, which mainly comprise reens and ponds/small lakes. This is anticipated particularly through:

1. Further establishing the vegetation within the reens which will help reduce the concentrations of organic contaminants and particularly nutrients such as ammoniacal nitrogen. The reens are known to vegetate rapidly and require regular maintenance to remove surplus growth;

2. Undertaking organic matter enrichment of soils along margins of the reens and ponds/lakes into which water penetrating the Made Ground are likely to discharge. This could be undertaken by placement of locally excavated peat (obtained from Alluvial and underlying Tidal Flat Deposits) and other soils containing high concentrations of organic matter. This should enable a further stripping out of low concentrations of PAHs and TPH within these discharge waters. Amendment of these soils with other materials will also be considered, taking into consideration further knowledge of the residual contaminant profile, in order to provide a passive sustainable solution to the long-term remediation of this site.

The preliminary validation plan for Phase 4h is attached to this note as an example of the typical layout of post earthworks validation sampling and monitoring locations for a residential phase.



GENERAL NOTES

NO DIMENSIONS TO BE SCALED OFF THIS DRAWING.

THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEER'S DRAWINGS.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

ALL LEVELS ARE IN METRES UNLESS NOTED OTHERWISE.

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

KEY:

- REMEDIATION STRATEGY BOUNDARY
- PHASE BOUNDARIES

Rev	Date	Amendments	By	Chk
A	03:05:22	Updated Boundary	SR	CW

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Remediation Strategy Boundary Plan

INFORMATION

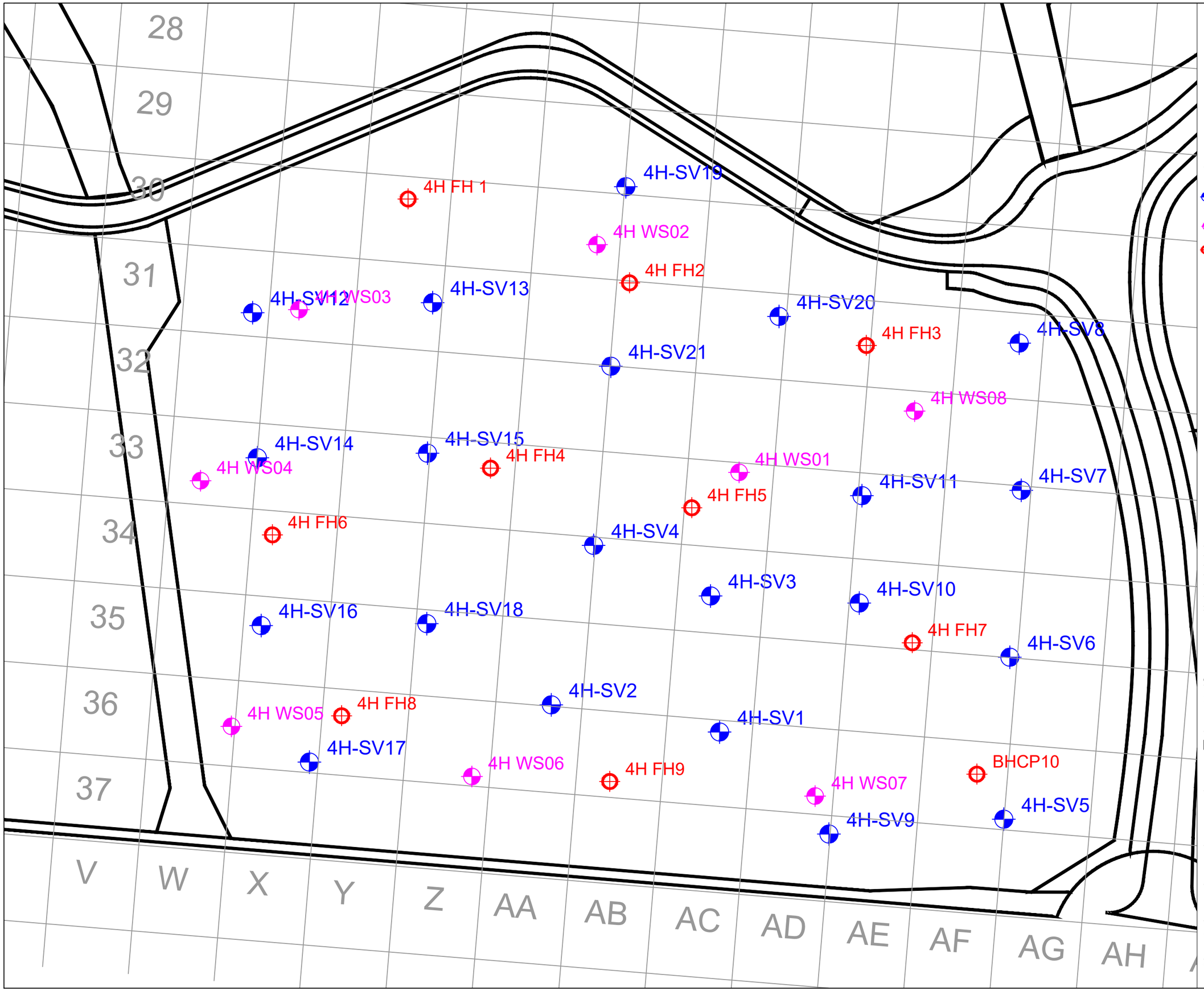
	Drawn	Checked	Date
NTS	SR	CW	27.04.22

Drawing No. — Rev.

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

KEY:

- 4H-SV — SURFACE VALIDATION CHEMICAL SAMPLE LOCATION
- 4H WS08 — WINDOW SAMPLE LOCATION FOR GAS AND PERCHED WATER MONITORING
- 4H FH3 — FALLING HEAD TEST LOCATION

Rev	Date	Amendments	By	Chk

Client

St Modwen Developments

Project

P18-669 Llanwern Reclamation

Drawing Title

Phase 4H Validation Plan

INFORMATION

	Drawn	Checked	Date
NTS	SR	CW	27.04.22

Drawing No. — Rev.

18669-RLL-22-XX-DR-O-0269

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