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Final Report

Report No.:	22-21697-1		
Initial Date of Issue:	16-Jun-2022		
Client	Rogers Geotechnical Services Ltd		
Client Address:	Offices 1&2, Barncliffe Business Park Near Bank Shelley Huddersfield West Yorkshire HD8 8LU		
Contact(s):	Harry Letch		
Project	C2113/21/E/3266 Yew Tree Lane		
Quotation No.:		**Date Received:**	10-Jun-2022
Order No.:		**Date Instructed:**	10-Jun-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	**Results Due:**	16-Jun-2022
Date Approved:	16-Jun-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Miscellaneous Solid

Project: C2113/21/E/3266 Yew Tree Lane

Client: Rogers Geotechnical Services Ltd			**Chemtest Job No.:**		22-21697
Quotation No.:			**Chemtest Sample ID.:**		1446025
			Sample Location:		TP06A
			Sample Type:		MISCSOLID
			Top Depth (m):		0
			Date Sampled:		08-Jun-2022
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
Naphthalene	N	2700	mg/kg	0.10	2200
Acenaphthylene	N	2700	mg/kg	0.10	53
Acenaphthene	N	2700	mg/kg	0.10	530
Fluorene	N	2700	mg/kg	0.10	430
Phenanthrene	N	2700	mg/kg	0.10	1700
Anthracene	N	2700	mg/kg	0.10	330
Fluoranthene	N	2700	mg/kg	0.10	1300
Pyrene	N	2700	mg/kg	0.10	1300
Benzo[a]anthracene	N	2700	mg/kg	0.10	540
Chrysene	N	2700	mg/kg	0.10	660
Benzo[b]fluoranthene	N	2700	mg/kg	0.10	520
Benzo[k]fluoranthene	N	2700	mg/kg	0.10	210
Benzo[a]pyrene	N	2700	mg/kg	0.10	460
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.10	270
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.10	110
Benzo[g,h,i]perylene	N	2700	mg/kg	0.10	250
Total Of 16 PAH's	N	2700	mg/kg	2.0	11000
Moisture	N		%	0.10	< 0.10

Results - Soil

Project: C2113/21/E/3266 Yew Tree Lane

Client: Rogers Geotechnical Services Ltd				**Chemtest Job No.:**	22-21697	22-21697	22-21697	22-21697	22-21697
Quotation No.:				**Chemtest Sample ID.:**	1446022	1446023	1446026	1446027	1446028
				Sample Location:	TP03	TP04	TP06A	TP07	TP08
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.6	0.3	0.7	0.1	0.3
				Date Sampled:	08-Jun-2022	08-Jun-2022	08-Jun-2022	08-Jun-2022	08-Jun-2022
				Asbestos Lab:	DURHAM	DURHAM	NEW-ASB	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
Cadmium	M	2455	mg/kg	0.10	0.20	0.14	< 0.10	< 0.10	0.56
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Copper	M	2455	mg/kg	0.50	16	25	8.6	5.0	180
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.70
Nickel	M	2455	mg/kg	0.50	8.7	10	2.2	2.4	13
Lead	M	2455	mg/kg	0.50	55	18	21	7.4	27
Zinc	M	2455	mg/kg	0.50	62	48	20	20	470
Vanadium	U	2455	mg/kg	0.5	8.5	10	4.3	5.2	22
Arsenic	M	2455	mg/kg	0.5	5.1	6.9	2.6	3.4	2.1
Selenium	M	2455	mg/kg	0.25	< 0.25	0.63	< 0.25	< 0.25	1.4
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Phenols	M	2920	mg/kg	0.10				< 0.10	< 0.10
Naphthalene	M	2700	mg/kg	0.10	0.51	0.39	0.62	0.96	0.51
Acenaphthylene	M	2700	mg/kg	0.10	1.0	0.36	0.45	0.88	0.34
Acenaphthene	M	2700	mg/kg	0.10	0.60	0.70	0.38	1.0	0.66
Fluorene	M	2700	mg/kg	0.10	0.42	0.71	0.36	1.5	0.61
Phenanthrene	M	2700	mg/kg	0.10	1.3	1.3	0.87	4.2	2.4
Anthracene	M	2700	mg/kg	0.10	0.31	0.17	0.28	1.1	0.56
Fluoranthene	M	2700	mg/kg	0.10	1.6	1.9	0.98	6.6	4.0
Pyrene	M	2700	mg/kg	0.10	1.7	1.9	0.65	7.0	4.3
Benzo[a]anthracene	M	2700	mg/kg	0.10	3.3	1.5	2.7	4.2	2.2
Chrysene	M	2700	mg/kg	0.10	2.2	1.4	3.5	4.0	2.3
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	1.0	1.6	< 0.10	7.9	3.2
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	2.9	0.56	< 0.10	3.8	1.1
Benzo[a]pyrene	M	2700	mg/kg	0.10	0.86	1.1	< 0.10	4.1	2.3
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	3.4	2.3	< 0.10	3.7	3.4
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	2.2	2.0	< 0.10	2.9	5.5
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	3.8	3.2	< 0.10	3.8	3.6
Total Of 16 PAH's	M	2700	mg/kg	2.0	27	21	11	58	37
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				48	< 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				48	< 5.0

Results - Soil

Project: C2113/21/E/3266 Yew Tree Lane

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Quotation No.:				**Chemtest Sample ID.:**	1446022	1446023	1446026	1446027	1446028
				Sample Location:	TP03	TP04	TP06A	TP07	TP08
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.6	0.3	0.7	0.1	0.3
				Date Sampled:	08-Jun-2022	08-Jun-2022	08-Jun-2022	08-Jun-2022	08-Jun-2022
				Asbestos Lab:	DURHAM	DURHAM	NEW-ASB	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**					
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				21	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0				130	< 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				150	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0				200	< 10
pH	M	2010		4.0	5.2	6.3	6.8	6.7	6.5
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010				0.52	0.025
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	30	22	22	37	26
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Roots	Stones and Roots	None	Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand
Sulphate (Total)	U	2430	%	0.010				0.16	0.079
Chromium	M	2455	mg/kg	0.5	9.2	11	3.4		
Organic Matter	M	2625	%	0.40	10	14	1.6	15	9.8

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
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.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
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
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	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-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
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