Our ref: JR/GML18246/SST1

Date: 5th February 2021

EMAIL (SCANNED)
Luke Boekestyn
Burmor Projects Ltd
Burmor House
Sunderland Road
Northfields Industrial Estate
Market Deeping
Peterborough
PE6 8FD

For the attention of Luke Boekestyn

Dear Luke,

GML18246: Sampling and Analysis of Subsoil Capping Materials at the Site off Willow Walk, Spalding

Geo-Matters Ltd were recently instructed by Burmor Projects Ltd (hereafter referred to as 'the Client') to undertake the *in situ* sampling and subsequent analysis of subsoil capping materials at their site off Willow Walk, Spalding.

The site is currently undergoing redevelopment for a residential end use, comprising traditional housing with private gardens. The development layout is shown on Drawing 001v (enclosed).

Relevant Reports which **must** be read in conjunction with this letter are referenced below:

- Ramboll Whitbybird Ltd – Law's Yard, Spalding – Environmental Factual & Interpretive Report for Leonard Cheshire (ref. 4926, dated November 2007);
- Geo-Matters Ltd - Site off Willow Walk, Spalding - Phase I and II Geo-Environmental Investigation for Minster Property Group Ltd (ref. GML18246/1/1, dated December 2018); and
- Geo-Matters Ltd - Site off Willow Walk, Spalding – Remedial Method Statement for Burmor Construction Ltd (ref. GML18246/4/1, dated February 2019).

This letter report provides information in relation to recent sampling and analysis of subsoil materials as described herein. It has been prepared for the sole use and reliance of Burmor Projects Ltd and their appointed agent, Geo-Matters Ltd. No other third-party may rely or reproduce the content of this report without the written approval of Geo-Matters Ltd. If any unauthorised third-party comes into possession of this report, they rely upon it entirely at their own risk and the authors do not owe them any warranty, duty of care or skill.

Site Sampling Works

It is understood that the Council have requested that samples be taken from each rear garden (Plots 1-5, 10-14 and 15-16) so that the quality of the capping materials can be confirmed.

Geo-Environmental Technicians from Geo-Matters Ltd attended the site on the 27th January 2021 to retrieve samples from each of the gardens in Plots 1-5, 10-14 and 15-16. A General Photographic Record of these works and a Sampling Plan are enclosed.

Analysis of Soil Samples

All samples were taken in snap top plastic containers and 250ml amber glass jars or vials. All samples were placed in cooled containers and transported to Geo-Matters Ltd's storage facility in Castle Donington whilst awaiting transfer to a UKAS / MCERTS accredited laboratory.

The samples taken were analysed for a range of common contaminants including heavy metals, benzo(a)pyrene and total petroleum hydrocarbons (TPH).

A combined set of Tier 1 Screening Values (T1SVs) shall be used for a residential end use with gardens / plant uptake as an initial and conservative assessment of the results.

The environmental analysis was scheduled by Geo-Matters Ltd and carried out by Chemtest laboratories (Newmarket). The full details of the test results are enclosed and are summarised in Table 1.0 overleaf.

Table 1.0: Chemical Test Data (Summary)

Determinand	No. of Samples Analysed	Concentration Range (mg/kg)	Tier 1 Screening Values (mg/kg)	No. Exceeding Threshold
Metals				
Arsenic	12	14.0 – 21.0	37.0[a]	0
Cadmium	12	<0.2 – 0.5	11.0[a]	0
Chromium (VI)	12	<0.5*	6.0[b]	0
Chromium (Total)	12	14.0 – 21.0	910.0[b]	0
Lead	12	35.0 -110.0	200.0[a]	0
Selenium	12	<0.5 – 0.8	250.0[b]	0
Nickel	12	16.0 – 25.0	130.0[b]	0
Copper	12	17.0 – 25.0	2400.0[b]	0
Zinc	12	54.0 – 73.0	3700.0[b]	0
Mercury	12	<0.1 – 0.6	40.0[b]	0
Organics and Inorganics				
Benzo(a)pyrene	12	<0.1 – 1.6	2.2[b]	0
TPH Aliphatic EC_5-EC_6	12	<1.0*	42.0[b]	0
TPH Aliphatic EC_6-EC_8	12	<1.0*	100.0[b]	0
TPH Aliphatic EC_8-EC_{10}	12	<1.0*	27.0[b]	0
TPH Aliphatic EC_{10}-EC_{12}	12	<1.0*	130.0[b]	0
TPH Aliphatic EC_{12}-EC_{16}	12	<1.0*	1100.0[b]	0
TPH Aliphatic EC_{16}-EC_{35}	12	<1.0 – 37.0	65000.0[b]	0
TPH Aromatic EC_5-EC_7	12	<1.0*	70.0[b]	0
TPH Aromatic EC_7-EC_8	12	<1.0*	130.0[b]	0
TPH Aromatic EC_8-EC_{10}	12	<1.0*	34.0[b]	0
TPH Aromatic EC_{10}-EC_{12}	12	<1.0*	74.0[b]	0
TPH Aromatic EC_{12}-EC_{16}	12	<1.0*	140.0[b]	0
TPH Aromatic EC_{16}-EC_{21}	12	<1.0 – 39.0	260.0[b]	0
TPH Aromatic EC_{21}-EC_{35}	12	<1.0 – 180.0	1100.0[b]	0
Phenols	12	<0.3*	280.0[b]	0

[a] DEFRA C4SL values for a residential end use with gardens / plant uptake;
[b] LQM 'S4UL' values for a residential end use with gardens / plant uptake;
[c] Geo-Matters general screening level;
* Contaminants all recorded below laboratory limits of detection;
N/A = Not Applicable, ND = Not Detected, D = Detected, DL = Detection Limits.

It is noted that the chemical testing results did not exceed the selected Tier 1 Screening Values shown above. However, 2 No. very slight exceedances were recorded for dibenzo(a,h,)anthracene (exceedance of 0.01mg/kg in sample 'Plot 12' and of 0.18mg/kg in sample 'Plot 2'). However, given the very slight margin of these exceedances and the overall low concentrations of all other determinands, risks are not considered to be present from these slight exceedances at this stage.

Copies of the chemical test certificates are enclosed.

Conclusions
Based on the site visit and subsequent analysis undertaken by Geo-Matters Ltd, it is considered that the subsoil capping materials present in the above listed plots are suitable for use.

This letter report should be submitted by the Client to the Local Authority and the NHBC for their approval and to allow all relevant conditions to be discharged.

We hope that the attached is sufficient for your present requirements, but should you have any further queries then please do not hesitate to contact the undersigned.

Yours sincerely
for Geo-Matters Ltd.

James Regan
Associate Director (Technical)

Encs.
Drawing 001v – Validation Hole Location Plan
Drawing 002v – Photographic Record Plan
Chemical Testing Certificates



DO NOT SCALE

NOTES:

N

Approx. Site Boundary

Approx. Sampling Positions

GEOMATTERS consulting engineers

www.geo-matters.com
info@geo-matters.com

CLIENT: burmor projects

PROJECT: Site off Willow Walk, Spalding

TITLE: Validation Hole Location Plan

SCALE@SIZE :	ISSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
JR	Feb. 2021
PROJECT No:	DRAWING No:
GML18246	001V

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DO NOT SCALE

NOTES:

N

Approx. Site Boundary

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CLIENT:

burmor projects

PROJECT:

Site off Willow Walk, Spalding

TITLE:

Photographic Record Plan

SCALE@SIZE :	ISSUE:
NTS	FINAL
DESIGN/DRAWN :	DATE:
JR	Feb. 2021
PROJECT No:	DRAWING No:
GML18246	002V

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UKAS TESTING 2183

mCERTS

Final Report

Report No.:	21-02776-1		
Initial Date of Issue:	05-Feb-2021		
Client	Geo-Matters Ltd		
Client Address:	104 Bondgate Castle Donington Derbyshire DE74 2NR		
Contact(s):	Group Email Address James Regan		
Project	GML18246 Site off Willow Walk, Spalding		
Quotation No.:	Q20-19604	**Date Received:**	01-Feb-2021
Order No.:	GML18246_JR_007X	**Date Instructed:**	01-Feb-2021
No. of Samples:	12		
Turnaround (Wkdays):	5	**Results Due:**	05-Feb-2021
Date Approved:	05-Feb-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: GML18246 Site off Willow Walk, Spalding

Client: Geo-Matters Ltd			**Chemtest Job No.:**		21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776
Quotation No.: Q20-19604			**Chemtest Sample ID.:**		1133412	1133413	1133414	1133415	1133416	1133417	1133418	1133419	1133420
			Sample Location:		PLOT 1	PLOT 2	PLOT 3	PLOT 4	PLOT 5	PLOT 10	PLOT 11	PLOT 12	PLOT 13
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.4	0.3	0.5	0.3	0.5	0.5	0.4	0.6
			Date Sampled:		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
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Moisture	N	2030	%	0.020	20	19	16	19	18	20	17	18	15
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	8.2	8.2	8.1	8.1	8.1	8.1	8.1	8.2	8.2
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.78	0.58	0.39	0.77	0.74	0.72	0.71	0.76	0.68
Sulphate (Total)	M	2430	%	0.010	0.71	0.77	0.86	0.64	0.75	0.76	0.84	0.73	0.66
Arsenic	M	2450	mg/kg	1.0	14	15	15	14	21	14	20	15	14
Cadmium	M	2450	mg/kg	0.10	0.24	0.27	0.28	0.27	0.45	0.25	0.31	0.28	0.28
Chromium	M	2450	mg/kg	1.0	14	16	16	15	20	16	21	17	19
Copper	M	2450	mg/kg	0.50	18	19	25	17	24	19	22	20	19
Mercury	M	2450	mg/kg	0.10	0.15	0.17	0.18	0.12	0.18	0.14	0.16	0.15	0.14
Nickel	M	2450	mg/kg	0.50	16	18	18	16	25	18	22	18	20
Lead	M	2450	mg/kg	0.50	46	45	110	35	48	41	48	46	40
Selenium	M	2450	mg/kg	0.20	0.54	0.72	0.78	0.67	0.83	0.72	0.75	0.67	0.67
Zinc	M	2450	mg/kg	0.50	57	58	60	54	73	59	71	65	58
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	6.6	6.8	6.2	5.8	6.2	6.1	6.3	5.7	5.9
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	10	24	37	10	28	< 1.0	8.4	32	35
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	10	24	37	10	28	< 5.0	8.4	32	35
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	39	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	38	75	89	95	63	180	52	64	120
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	38	75	89	95	63	220	52	64	120
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	48	98	130	100	91	220	61	96	150
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	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: GML18246 Site off Willow Walk, Spalding

Client: Geo-Matters Ltd			**Chemtest Job No.:**		21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776	21-02776
Quotation No.: Q20-19604			**Chemtest Sample ID.:**		1133412	1133413	1133414	1133415	1133416	1133417	1133418	1133419	1133420
			Sample Location:		PLOT 1	PLOT 2	PLOT 3	PLOT 4	PLOT 5	PLOT 10	PLOT 11	PLOT 12	PLOT 13
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.2	0.4	0.3	0.5	0.3	0.5	0.5	0.4	0.6
			Date Sampled:		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
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	1.3	0.83	0.51	< 0.10	0.81	0.73	1.1	1.0
Anthracene	M	2700	mg/kg	0.10	< 0.10	0.16	0.23	0.14	< 0.10	0.21	0.26	0.33	0.37
Fluoranthene	M	2700	mg/kg	0.10	2.3	3.1	1.3	1.1	1.4	1.5	1.8	1.8	1.6
Pyrene	M	2700	mg/kg	0.10	1.8	2.5	1.3	0.93	1.3	1.3	1.7	1.8	1.8
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	1.4	0.55	< 0.10	< 0.10	< 0.10	< 0.10	0.78	0.70
Chrysene	M	2700	mg/kg	0.10	< 0.10	0.20	0.67	< 0.10	< 0.10	< 0.10	< 0.10	0.77	0.89
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	1.6	1.0	< 0.10	< 0.10	< 0.10	< 0.10	1.2	1.1
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	0.52	0.70	< 0.10	< 0.10	< 0.10	< 0.10	0.40	0.35
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	1.6	0.89	< 0.10	< 0.10	< 0.10	< 0.10	1.1	0.98
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	1.2	0.56	< 0.10	< 0.10	< 0.10	< 0.10	0.75	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	0.48	0.19	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	1.3	0.90	< 0.10	< 0.10	< 0.10	< 0.10	1.0	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	4.1	15	9.1	2.7	2.7	3.8	4.5	11	8.8
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Results - Soil

Project: GML18246 Site off Willow Walk, Spalding

Client: Geo-Matters Ltd			**Chemtest Job No.:**		21-02776	21-02776	21-02776
Quotation No.: Q20-19604			**Chemtest Sample ID.:**		1133421	1133422	1133423
			Sample Location:		PLOT 14	PLOT 15	PLOT 16
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.4	0.3	0.5
			Date Sampled:		27-Jan-2021	27-Jan-2021	27-Jan-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020	15	14	14
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand
pH	M	2010		4.0	8.1	8.2	8.2
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.72	0.46	0.65
Sulphate (Total)	M	2430	%	0.010	0.72	0.68	0.73
Arsenic	M	2450	mg/kg	1.0	16	15	14
Cadmium	M	2450	mg/kg	0.10	0.28	0.28	0.27
Chromium	M	2450	mg/kg	1.0	17	17	18
Copper	M	2450	mg/kg	0.50	19	19	19
Mercury	M	2450	mg/kg	0.10	0.14	0.13	0.56
Nickel	M	2450	mg/kg	0.50	18	17	19
Lead	M	2450	mg/kg	0.50	44	39	43
Selenium	M	2450	mg/kg	0.20	0.64	0.63	0.72
Zinc	M	2450	mg/kg	0.50	59	57	65
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Total Organic Carbon	M	2625	%	0.20	6.0	5.6	6.3
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	29	< 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	29	< 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
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	99	< 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	99	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	130	< 10	< 10
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: GML18246 Site off Willow Walk, Spalding

Client: Geo-Matters Ltd			**Chemtest Job No.:**		21-02776	21-02776	21-02776
Quotation No.: Q20-19604			**Chemtest Sample ID.:**		1133421	1133422	1133423
			Sample Location:		PLOT 14	PLOT 15	PLOT 16
			Sample Type:		SOIL	SOIL	SOIL
			Top Depth (m):		0.4	0.3	0.5
			Date Sampled:		27-Jan-2021	27-Jan-2021	27-Jan-2021
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	1.5	1.6	2.2
Pyrene	M	2700	mg/kg	0.10	1.4	1.6	2.8
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	2.9	3.2	5.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30

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
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.
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 operation 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 45 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