

Our Ref: R2259-L20211008
Planning ref: P/2020/0873

08th October 2021

Mark Davies

By e-mail: mark.davies@wrexhamsolicitors.co.uk

Dear Mark,

Land off Lower Road, Coedpoeth

Mr Mark Davies initially appointed Smith Grant LLP (SGP) to undertake a Phase 1 Contamination Assessment for the above site (ref: R2259-R01-v1; April 2016) which determined that the main risks to future site users with respect to contaminated land was the potential presence of elevated lead in the site soils due to historic mining activities in the general area; the site was also confirmed to be at risk from radon ingress therefore radon protection measures were recommended for all new buildings / extensions. As a result of the potential contamination identified on site, further site investigation was recommended in the areas of proposed soft landscaping to determine the levels of heavy metals (specifically lead, cadmium and zinc) in the shallow soils. It is understood that this report was submitted to Wrexham County Borough Council (WCBC) and correspondence provided on 20th January 2021 confirms that the Contaminated Land Officer (CLO) was in agreement with the recommendations.

SGP were also instructed to carry out a subsequent Phase 2 (Intrusive Investigation) Contamination Assessment (ref: R2259-R02-v1; May 2016) and moderately elevated lead exceeding human health criterion for a residential land use was reported in four of the six samples submitted for heavy metals analysis. Following this report a Remediation Strategy was produced (ref: R2259-L01 V2) which determined that a 600mm cover system will be required in all areas of soft landscaping due to the lead contamination identified on site. It is assumed that a copy of these reports has been submitted for regulatory approval.

Scope of Validation

The Strategy required that testing of imported soil (subsoil and/or topsoil) is undertaken at a sampling frequency of 1 per 50m³ for material from a brownfield or unknown/uncharacterised source or 1 per 250m³ from a confirmed greenfield source with a minimum of 4 samples per single source. Results are to be compared to the generic assessment criteria for residential use as detailed in Table 4 of the Strategy.

Following placement within the garden area, depth validation through the excavation of a hand-dug pit was required to verify the placement of the prescribed 600mm soil cover.

Validation

SGP Consultant, Megan Jones, attended the site on 29th September 2021 to carry out the validation works as discussed in the section above in accordance with the Remediation Strategy. Depth validation and sampling of the garden cover soils were carried out concurrently.

The trial holes were excavated to maximum depth of 0.6m bgl. Topsoil consisted of dark brown, sandy topsoil with frequent rootlets, pebbles, stones, and some brick fragments and subsoil consisted of firm, yellow, silty clay.

Samples were collected from each trial pit of both the topsoil (0-0.25m) and subsoil (0.25- 0.6m) arisings which were submitted for the suite of analysis detailed in the Remediation Strategy (lab ref. 21-34093).

A verification certificate detailing a photographic record, confirmation of the placed soil cover depth and summary of laboratory results is presented below. A copy of the laboratory test certificate is provided in Appendix A.

Mark Davies



Job number	R2259	Depth ref:	R2259-L01 v2	Quality ref:	R2259-L01 v2	Other documents attached	✓						
Date	08.10.21	Area use:	garden	landscaped	stockpile	other							
Site name / location	Land off Lower Road, Coedpoeth	Size area (m):	5 x 6	Approx. Area (m ²):	30	Approx. Depth Top (m):	0.3	Approx. Volume Top (m ³):	9	Approx. Depth Sub (m):	0.3	Approx. Volume Sub (m ³):	9
Plot / location:	Rear Garden												
Compiled by:	MJ	Number depth entries required		1; 4 entries provided.		Number samples required:		4 TS & 4 SS (<i>minimum of 4 from any one source</i>); 4 TS and 4 SS samples provided.					
Quality Validation		inspection date/time:		29.09.21		inspected by:		MJ		photographed:		✓	

notes (see below)		✓ / ✗	
Source Topsoil	1.	✓	Top y Rhos farm, Pentre Lane, Hope Mountain, Caergwle Wrexham.
Description Topsoil	2.	✓	Dark brown, sandy topsoil with frequent organic matter (rootlets), pebbles, stones, and some brick fragments
Sample Topsoil	3.	✓	4 samples taken at site from trial holes on 29.09.21 (Chemtest ref: 21-34093; HDP1-TS-S1, HDP2-TS-S1, HDP3-TS-S1 & HDP4-TS-S1)
Source Subsoil	4.	✓	Pant Farm, Pentre Lane, Hope Mountain, Caergwle, Wrexham
Description Subsoil	5.	✓	Firm, yellow, silty clay
Sample Subsoil	6.	✓	4 samples taken at site from trial holes on 29.09.21 (Chemtest ref: 21-34093; HDP1-SS-S1, HDP2-SS-S1, HDP3-SS-S1 & HDP4-SS-S1)

Table 1: Topsoil Analysis Summary

Contaminant	Soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
asbestos Fibres	NAD	NAD	Yes
pH	-	7.9-8.4	Yes
soil organic matter	-	2.6-5.2	-
arsenic	37	5.1-7.7	Yes
cadmium	11	0.2-0.45	Yes
chromium III	910	12-24	Yes
chromium VI	6	<0.5	Yes
copper	2,400	21-100	Yes
lead	200	52-120	Yes
mercury	40	<0.1 -0.11	Yes
nickel	130	13-30	Yes
zinc	3,700	71-130	Yes
naphthalene	2.3	<0.1	Yes
acenaphthene	210	<0.1	Yes
acenaphthylene	170	<0.1	Yes
fluorene	170	<0.1	Yes
phenanthrene	95	<0.1-1.0	Yes
anthracene	280	<0.1-0.26	Yes
fluoranthene	2,400	<0.1-1.5	Yes
pyrene	620	<0.1-1.9	Yes
benzo(a)anthracene	7.2	<0.1-1.1	Yes

Contaminant	Soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
chrysene	15	<0.1-0.94	Yes
benzo(b)fluoranthene	2.6	<0.1-1.3	Yes
benzo(k)fluoranthene	77	<0.1-0.86	Yes
benzo(a)pyrene	2.2	<0.1-0.72	Yes
indeno(123cd)pyrene	27	<0.1	Yes
dibenzo(ah)anthracene	0.24	<0.1	Yes
benzo(ghi)perylene	320	<0.1	Yes
Aliphatic C5-C6	42	<1.0	Yes
Aliphatic C6-C8	100	<1.0	Yes
Aliphatic C8-C10	27	<1.0	Yes
Aliphatic C10-C12	130	<1.0	Yes
Aliphatic C12-C16	1,100	<1.0	Yes
Aliphatic C16-C21	65,000	<1.0	Yes
Aliphatic C21-C35	65,000	<1.0	Yes
Aromatic C6-C7	70	<1.0	Yes
Aromatic C7-C8	130	<1.0	Yes
Aromatic C8-C10	34	<1.0	Yes
Aromatic C10-C12	74	<1.0	Yes
Aromatic C12-C16	140	<1.0	Yes
Aromatic C16-C21	260	<1.0	Yes
Aromatic C21-C35	1,100	<1.0	Yes

Table 2: Subsoil Analysis Summary

Contaminant	soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
asbestos Fibres	NAD	NAD	Yes
pH	-	8.0-8.3	Yes
soil organic matter	-	2.9-5.5	-
arsenic	37	5.0-6.9	Yes
cadmium	11	<0.10-0.31	Yes
chromium III	910	10-27	Yes
chromium VI	6	<0.5	Yes
copper	2,400	25-110	Yes
lead	200	51-89	Yes
mercury	40	<0.10	Yes
nickel	130	12-34	Yes
zinc	3,700	70-110	Yes
naphthalene	2.3	<0.1	Yes
acenaphthene	210	<0.1	Yes
acenaphthylene	170	<0.1	Yes
fluorene	170	<0.1	Yes
phenanthrene	95	<0.1	Yes
anthracene	280	<0.1	Yes
fluoranthene	2,400	<0.1-0.69	Yes
pyrene	620	<0.1-0.68	Yes
benzo(a)anthracene	7.2	<0.1	Yes

Contaminant	Soil standard adopted (mg/kg)	Concentrations (mg/kg)	Compliant?
chrysene	15	<0.1	Yes
benzo(b)fluoranthene	2.6	<0.1	Yes
benzo(k)fluoranthene	77	<0.1	Yes
benzo(a)pyrene	2.2	<0.1	Yes
indeno(123cd)pyrene	27	<0.1	Yes
dibenzo(ah)anthracene	0.24	<0.1	Yes
benzo(ghi)perylene	320	<0.1	Yes
Aliphatic C5-C6	42	<1.0	Yes
Aliphatic C6-C8	100	<1.0	Yes
Aliphatic C8-C10	27	<1.0	Yes
Aliphatic C10-C12	130	<1.0	Yes
Aliphatic C12-C16	1,100	<1.0	Yes
Aliphatic C16-C21	65,000	<1.0	Yes
Aliphatic C21-C35	65,000	<1.0	Yes
Aromatic C6-C7	70	<1.0	Yes
Aromatic C7-C8	130	<1.0	Yes
Aromatic C8-C10	34	<1.0	Yes
Aromatic C10-C12	74	<1.0	Yes
Aromatic C12-C16	140	<1.0	Yes
Aromatic C16-C21	260	<1.0	Yes
Aromatic C21-C35	1,100	<1.0	Yes

Depth Validation	Inspection date/time:	29.09.21	Inspected by:	MJ	Photographed:	✓
HDP1	Required Depth (mm)	600	Measured Depth (mm)	600	PASS	
Source Topsoil	Top y Rhos farm, Pentre Lane, Hope Mountain, Caergwrle Wrexham					
Source Subsoil	Pant Farm, Pentre Lane, Hope Mountain, Caergwrle, Wrexham					
Soil profile/description	0.00-0.3m	Dark brown, sandy topsoil with frequent organic matter (rootlets), pebbles, stones, and some brick fragments.				
	0.3-0.6m	Firm, yellow, silty clay				
	0.6m	Base				
Photograph (depth profile)		Photograph (soil type)		Photograph (location)		
		 Topsoil  Subsoil				

Depth Validation	Inspection date/time:	29.09.21	Inspected by:	MJ	Photographed:	✓
HDP2	Required Depth (mm)	600	Measured Depth (mm)	600	PASS	
Source Topsoil	Top y Rhos farm, Pentre Lane, Hope Mountain, Caergwrle Wrexham					
Source Subsoil	Pant Farm, Pentre Lane, Hope Mountain, Caergwrle, Wrexham					
Soil profile/description	0.00-0.3m	Dark brown, sandy topsoil with frequent organic matter (rootlets), pebbles, stones, and some brick fragments.				
	0.3-0.6m	Firm, yellow, silty clay				
	0.6m	Base				
Photograph (depth profile)		Photograph (soil type)		Photograph (location)		
		 Topsoil  Subsoil				

Depth Validation	Inspection date/time:	29.09.21	Inspected by:	MJ	Photographed:	✓
HDP3	Required Depth (mm)	600	Measured Depth (mm)	600	PASS	
Source Topsoil	Top y Rhos farm, Pentre Lane, Hope Mountain, Caergwrle Wrexham					
Source Subsoil	Pant Farm, Pentre Lane, Hope Mountain, Caergwrle, Wrexham					
Soil profile/description	0.00-0.25m	Dark brown, sandy topsoil with frequent organic matter (rootlets), pebbles, stones, and some brick fragments.				
	0.25-0.6m	Firm, yellow, silty clay				
	0.6m	Base				
Photograph (depth profile)		Photograph (soil type)		Photograph (location)		
		 Topsoil  Subsoil				

Depth Validation	Inspection date/time:	29.09.21	Inspected by:	MJ	Photographed:	✓
HDP4	Required Depth (mm)	600	Measured Depth (mm)	600	PASS	
Source Topsoil	Top y Rhos farm, Pentre Lane, Hope Mountain, Caergwrle Wrexham					
Source Subsoil	Pant Farm, Pentre Lane, Hope Mountain, Caergwrle, Wrexham					
Soil profile/description	0.00-0.3m	Dark brown, sandy topsoil with frequent organic matter (rootlets), pebbles, stones, and some brick fragments.				
	0.3-0.6m	Firm, yellow, silty clay				
	0.6m	Base				
Photograph (depth profile)		Photograph (soil type)		Photograph (location)		
		 Topsoil  Subsoil				

Mark Davies



Conclusions

Four topsoil and four subsoil samples were taken and tested for a standard analysis suite as specified in the Remediation Strategy, this satisfies the required testing frequency of 1 sample per 50m³ / minimum 4 samples per single source. No exceedances were reported confirming that the soil placed within the garden area is suitable for use.

Four depth entries across the garden area have confirmed that the prescribed 600mm depth of soil cover has been placed.

It is concluded that remedial works have been completed in accordance with the Remediation Strategy and that no further works are required.

Yours sincerely
for: Smith Grant LLP

A handwritten signature in black ink, appearing to read 'Meg Jones', is positioned above the printed name.

Meg Jones
BSc MSc AMIEnvSc

APPENDIX A

Lab Results



2183

Final Report

Report No.: 21-34093-1
Initial Date of Issue: 07-Oct-2021
Client Smith Grant LLP
Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL
Contact(s): Megan Jones
Scott Miller
Project R2259 Cower Road, Coedpoeth
Quotation No.:
Order No.:
No. of Samples: 8
Turnaround (Wkdays): 5
Date Approved: 07-Oct-2021

Date Received: 01-Oct-2021

Date Instructed: 01-Oct-2021

Results Due: 07-Oct-2021

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: R2259 Cower Road, Coedpoeth

Client: Smith Grant LLP	Chemtest Job No.:				21-34093	21-34093	21-34093	21-34093	21-34093	21-34093	21-34093	21-34093
Quotation No.:	Chemtest Sample ID.:				1289862	1289863	1289864	1289865	1289866	1289867	1289868	1289869
Order No.:	Client Sample Ref.:				TS	SS	TS	SS	TS	SS	TS	SS
	Client Sample ID.:				S1	S1	S1	S1	S1	S1	S1	S1
	Sample Location:				HDP1	HDP1	HDP2	HDP2	HDP3	HDP3	HDP4	HDP4
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0	0.3	0	0.3	0	0.25	0	0.3
	Bottom Depth (m):				0.3	0.6	0.3	0.6	0.25	0.6	0.3	0.6
	Date Sampled:				29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021
	Asbestos Lab:				DURHAM	DURHAM	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	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	16	16	15	12	14	12	15	54
pH	U	2010		4.0	8.4	8.0	7.9	8.3	8.2	8.1	8.3	8.3
Arsenic	U	2450	mg/kg	1.0	5.1	6.9	6.9	5.1	7.7	5.0	7.5	6.6
Cadmium	U	2450	mg/kg	0.10	0.39	0.24	0.20	0.31	0.32	0.21	0.45	< 0.10
Chromium	U	2450	mg/kg	1.0	12	27	20	10	24	17	16	25
Copper	U	2450	mg/kg	0.50	21	110	24	38	100	72	27	25
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	0.11	< 0.10	0.10	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	13	34	24	12	30	20	17	31
Lead	U	2450	mg/kg	0.50	89	89	52	81	100	69	120	51
Selenium	U	2450	mg/kg	0.20	0.23	0.30	< 0.20	< 0.20	0.31	< 0.20	0.21	0.28
Zinc	U	2450	mg/kg	0.50	95	110	71	98	110	80	130	70
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	U	2625	%	0.40	5.2	2.9	2.6	4.4	3.8	5.5	5.4	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
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	U	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	U	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	U	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	U	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	U	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	U	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	U	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	U	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	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Results - Soil

Project: R2259 Cower Road, Coedpoeth

Client: Smith Grant LLP	Chemtest Job No.:				21-34093	21-34093	21-34093	21-34093	21-34093	21-34093	21-34093	21-34093
Quotation No.:	Chemtest Sample ID.:				1289862	1289863	1289864	1289865	1289866	1289867	1289868	1289869
Order No.:	Client Sample Ref.:				TS	SS	TS	SS	TS	SS	TS	SS
	Client Sample ID.:				S1	S1	S1	S1	S1	S1	S1	S1
	Sample Location:				HDP1	HDP1	HDP2	HDP2	HDP3	HDP3	HDP4	HDP4
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0	0.3	0	0.3	0	0.25	0	0.3
	Bottom Depth (m):				0.3	0.6	0.3	0.6	0.25	0.6	0.3	0.6
	Date Sampled:				29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021	29-Sep-2021
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Acenaphthylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.0	< 0.10	< 0.10	< 0.10
Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26	< 0.10	< 0.10	< 0.10
Fluoranthene	U	2700	mg/kg	0.10	0.29	0.11	< 0.10	0.69	1.5	0.34	0.49	< 0.10
Pyrene	U	2700	mg/kg	0.10	0.27	0.19	< 0.10	0.68	1.9	0.43	0.59	< 0.10
Benzo[a]anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	0.53	< 0.10
Chrysene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.94	< 0.10	0.66	< 0.10
Benzo[b]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.86	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.72	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	9.6	< 2.0	2.3	< 2.0
Benzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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
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; Dibenzo[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)
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.

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