

Our Ref: RH/12032/VP76-99

Your Ref:

Contact: Ruth Howells

12th November 2020

NHBC

For the attn. of Mr Steve Moreby

Dear Steve

PLOTS 76-99, PHASE 2, HERBERT ROAD NEWPORT: CAPPING VALIDATION

I confirm that the required 600mm of remedial capping has now been imported and validated within the landscaped and garden areas of Plots 76-99.

Both subsoil and topsoil has been imported, comprising one source of subsoil (SS) and two sources of topsoil (TS1 & TS2). Each of the three soil sources did not exceed 250m³.

A visit was made to site on 2nd November 2020 to sample the imported soils and to confirm the capping thickness. Four samples of each soil source were taken.

Sample/validation hole locations are illustrated in **Figure 1** below. Those shown in yellow are the locations where the capping thickness of 600mm was confirmed by hand dug holes.

Please see **Annex A** for photographs of the trial holes.

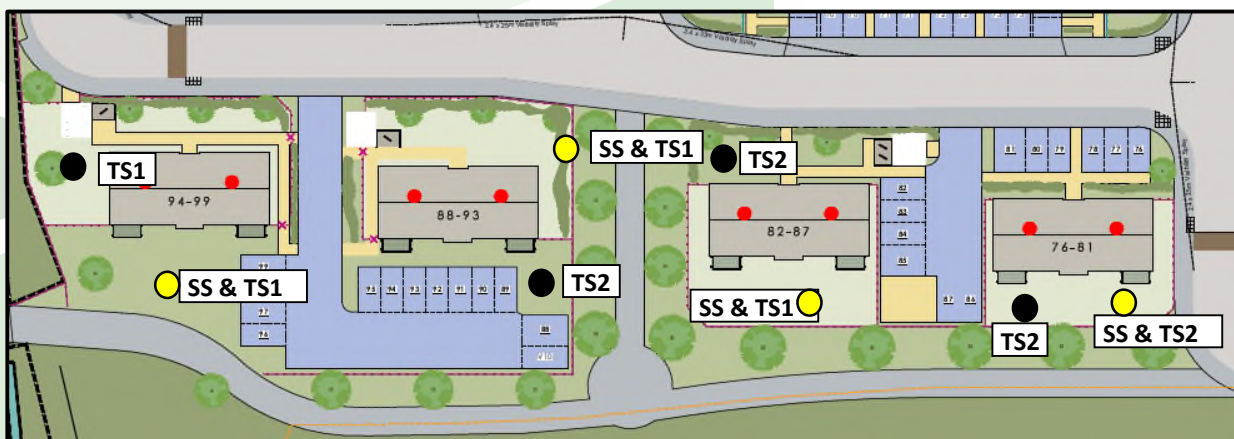


Figure 1: Validation Locations

The samples were submitted for laboratory analysis at the laboratory of Eurofins Chemtest. The chemical test certificate may be found in **Annex B**.

Comparison of the analytical results has been made residential (including plant uptake) Suitable 4 Use Levels (S4ULs) provided by Land Quality Management Limited and the Chartered Institute of Environmental Health (CIEH). Where CIEH thresholds are not available reference has been made to Category 4 Screening Levels (C4SLs).

Both subsoil and topsoil results are summarised in the following table.

Table 1 Summary of Soil Chemical Test Results Imported Soils					
Substance	SGV/GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Arsenic	37	CIEH	5.3	20	0
Boron	290	CIEH	0.6	2.3	0
Cadmium	11	CIEH	0.17	1.4	0
Chromium III	910	CIEH	9.3	75	0
Chromium VI	6	CIEH	<0.5	<0.5	0
Copper	2400	CIEH	14	100	0
Lead	200	C4SL	25	110	0
Mercury	40	CIEH	<0.05	0.18	0
Nickel	130	CIEH	20	46	0
Selenium	250	CIEH	<0.2	0.29	0
Zinc	3700	CIEH	68	290	0
Cyanide	8	-	<0.5	<0.5	0
Phenols	120	CIEH	<0.3	<0.3	0
Organic Matter	-	-	0.8	4.2	-
pH	-	-	7.8	9.1	-
Asbestos	-	-	Not detected	Not detected	-

**Table 1 Summary of Soil Chemical Test Results (Continued)
Imported Soils**

Substance	SGV/GAC (mg/kg)	Source	Measured Concentrations of Tested Substances (mg/kg)		Number of Exceedances
			Minimum	Maximum	
Naphthalene	2.3	CIEH	<0.1	<0.1	0
Acenaphthylene	170	CIEH	<0.1	<0.1	0
Acenaphthene	210	CIEH	<0.1	<0.1	0
Fluorene	170	CIEH	<0.1	<0.1	0
Phenanthrene	95	CIEH	<0.1	0.82	0
Anthracene	2400	CIEH	<0.1	0.18	0
Fluoranthene	280	CIEH	<0.1	1.1	0
Pyrene	620	CIEH	<0.1	1.2	0
Benzo(a)anthracene	7.2	CIEH	<0.1	0.69	0
Chrysene	15	CIEH	<0.1	0.87	0
Benzo(b)fluoranthene	2.6	CIEH	<0.1	<0.1	0
Benzo(k)fluoranthene	77	CIEH	<0.1	<0.1	0
Benzo(a)pyrene	2.2	CIEH	<0.1	<0.1	0
Indeno(123cd)pyrene	27	CIEH	<0.1	<0.1	0
Dibenzo(ah)anthracene	0.24	CIEH	<0.1	<0.1	0
Benzo(ghi)perylene	320	CIEH	<0.1	<0.1	0
Aliphatic					
PH C5 – C6 Ali	42	CIEH	<1.0	<1.0	0
PH C6 – C8 Ali	100	CIEH	<1.0	<1.0	0
PH C8 – C10 Ali	27	CIEH	<1.0	<1.0	0
PH C10 – C12 Ali	130	CIEH	<1.0	<1.0	0
PH C12 – C16 Ali	1100	CIEH	<1.0	<1.0	0
PH C16 – C21 Ali*	65000	CIEH	<1.0	<1.0	0
PH C21 – C35 Ali*	65000	CIEH	<1.0	<1.0	0
PH C35 – C44 Ali	65000	CIEH	<1.0	<1.0	0
Aromatic					
PH C5 – C7 Arom	70	CIEH	<1.0	<1.0	0
PH C7 – C8 Arom	130	CIEH	<1.0	<1.0	0
PH C8 – C10 Arom	34	CIEH	<1.0	<1.0	0
PH C10 – C12 Arom	74	CIEH	<1.0	<1.0	0
PH C12 – C16 Arom	140	CIEH	<1.0	<1.0	0
PH C16 – C21 Arom	260	CIEH	<1.0	<1.0	0
PH C21 – C35 Arom	1100	CIEH	<1.0	<1.0	0
PH C35 – C44 Arom	1100	CIEH	<1.0	<1.0	0

Notes

- Thresholds based on 1.0% SOM
- CIEH for Ali C16 - 21 and C21 - C35 based on CIEH for EC >16 – 35

From the above table it can be seen that all substances tested for are present at levels below their respective human health threshold levels. It is therefore confirmed that the imported subsoil and topsoil are uncontaminated and do not present a risk to the human health of future site residents.

I trust that the above is to your satisfaction, however, if you have any queries or require any further information please do not hesitate to contact me.

Yours sincerely
for: Terra Firma (Wales) Ltd



Mrs Ruth Howells

Annex A
Photographs of Soil Sampling and Capping Thickness Validation

PLOTS 76-81



PLOTS 82-87



PLOTS 88-93



PLOTS 94-99



Annex B
Laboratory Soil Chemical Test Results



Final Report

Report No.: 20-29585-1

Initial Date of Issue: 09-Nov-2020

Client: Terra Firma (Wales) Ltd

Client Address: 5 Deryn Court
Wharfedale Road
Pentwyn
Cardiff
CF23 7HA

Contact(s): ruth@terrafirmawales.co.uk

Project: Herbert Road

Quotation No.: **Date Received:** 02-Nov-2020

Order No.: 123032RH **Date Instructed:** 02-Nov-2020

No. of Samples: 12

Turnaround (Wkdays): 5 **Results Due:** 06-Nov-2020

Date Approved: 09-Nov-2020

Approved By:


Details: Glynn Harvey, Technical Manager

Results - Soil

Project: Herbert Road

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:		20-29585	20-29585	20-29585	20-29585	20-29585	20-29585	20-29585	20-29585	20-29585	20-29585
Quotation No.:		Chemtest Sample ID.:		1089890	1089891	1089892	1089893	1089894	1089895	1089896	1089897	1089898	
Order No.: 123032RH		Client Sample Ref.:		PLOTS 81-76 SS	PLOTS 82-87 SS	PLOTS 88-93 SS	PLOTS 94-99 SS	PLOTS 82-87 TS1	PLOTS 88-93 TS1	PLOTS 94-99 TS1	PLOTS 94-99B TS1	PLOTS 76-81 TS2	
		Client Sample ID.:		PLOTS 81-76 SS	PLOTS 21-87 SS	PLOTS 22-93 SS	PLOTS 94-99 SS	PLOTS 82-87 TS1	PLOTS 88-93 TS1	PLOTS 94-99 TS1	PLOTS 94-99B TS1	PLOTS 76-81 TS2	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Date Sampled:		29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	29-Oct-2020	
		Time Sampled:		12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	
		Asbestos Lab:		DURHAM	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	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	16	28	14	16	17	12	16	17	29
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 and Roots	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay	Clay	Sand	Sand	Sand
pH	M	2010		4.0	8.8	7.8	8.4	9.1	8.6	8.8	8.4	8.3	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.60	0.62	0.73	1.0	0.84	1.1	0.77	0.81	1.5
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
Sulphate (Acid Soluble)	M	2430	%	0.010	0.067	0.075	0.069	0.12	0.059	0.12	0.062	0.055	0.048
Arsenic	M	2450	mg/kg	1.0	14	13	20	14	14	16	13	11	6.8
Cadmium	M	2450	mg/kg	0.10	0.61	0.87	0.78	1.4	1.0	1.4	0.91	0.64	0.30
Chromium	M	2450	mg/kg	1.0	19	18	25	30	22	75	18	18	15
Mercury Low Level	M	2450	mg/kg	0.05	0.08	0.15	0.09	0.13	0.16	0.10	0.18	0.16	0.06
Copper	M	2450	mg/kg	0.50	19	27	34	26	29	100	27	31	18
Nickel	M	2450	mg/kg	0.50	20	24	28	27	29	46	21	20	28
Lead	M	2450	mg/kg	0.50	47	77	64	58	86	110	79	66	31
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	0.21	< 0.20	0.28	< 0.20	0.24	0.29	< 0.20
Zinc	M	2450	mg/kg	0.50	97	160	170	140	170	290	170	140	94
Chromium (Trivalent)	N	2490	mg/kg	1.0	19	18	25	30	22	75	18	18	15
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
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: Herbert Road

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:											
Quotation No.:		20-29585		20-29585		20-29585		20-29585		20-29585		20-29585	
Order No.: 123032RH		Chemtest Sample ID.:											
Client Sample Ref.:		1089890		1089891		1089892		1089893		1089894		1089895	
Client Sample ID.:		PLOTS 81-76 SS		PLOTS 82-87 SS		PLOTS 88-93 SS		PLOTS 94-99 SS		PLOTS 82-87 TS1		PLOTS 88-93 TS1	
Sample Type:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
Date Sampled:		29-Oct-2020		29-Oct-2020		29-Oct-2020		29-Oct-2020		29-Oct-2020		29-Oct-2020	
Time Sampled:		12:00		12:00		12:00		12:00		12:00		12:00	
Asbestos Lab:		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM		DURHAM	
Determinand	Accred.	SOP	Units	LOD									
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 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	< 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	< 10	< 10	< 10	< 10	< 10
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
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	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.71	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	< 0.10	0.69	0.49	0.82	0.28	0.44	1.1	0.72	< 0.10
Pyrene	M	2700	mg/kg	0.10	< 0.10	0.78	0.65	1.0	0.35	0.78	1.2	0.72	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.41	0.50	< 0.10	< 0.10	0.69	0.38	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10	0.33	0.87	< 0.10	< 0.10	0.67	0.60	< 0.10
Benzo[b]fluoranthene	M	2700	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	2700	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	2700	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	2700	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	M	2700	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	2700	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	M	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	3.2	< 2.0	< 2.0	4.5	2.4	< 2.0
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
Organic Matter BS1377	N	2930	%	0.10	1.7	3.0	1.2	0.80	3.4	1.3	3.4	3.8	4.2

Results - Soil

Project: Herbert Road

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:			20-29585	20-29585	20-29585
Quotation No.:		Chemtest Sample ID.:			1089899	1089900	1089901
Order No.: 123032RH		Client Sample Ref.:			PLOTS 76-81B TS2	PLOTS 82-87 TS2	PLOTS 88-93 TS2
		Client Sample ID.:			PLOTS 76-81B TS2	PLOTS 82-87 TS2	PLOTS 88-93 TS2
		Sample Type:			SOIL	SOIL	SOIL
		Date Sampled:			29-Oct-2020	29-Oct-2020	29-Oct-2020
		Time Sampled:			12:00	12:00	12:00
		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
ACM Detection Stage	U	2192		N/A	-	-	-
Moisture	N	2030	%	0.020	20	22	16
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Sand	Sand	Sand
pH	M	2010		4.0	8.3	8.3	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.5	1.8	2.3
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.047	0.062	0.076
Arsenic	M	2450	mg/kg	1.0	8.7	6.8	5.3
Cadmium	M	2450	mg/kg	0.10	0.23	0.23	0.17
Chromium	M	2450	mg/kg	1.0	20	15	9.3
Mercury Low Level	M	2450	mg/kg	0.05	0.07	0.06	< 0.05
Copper	M	2450	mg/kg	0.50	21	25	14
Nickel	M	2450	mg/kg	0.50	33	24	23
Lead	M	2450	mg/kg	0.50	34	25	30
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	110	84	68
Chromium (Trivalent)	N	2490	mg/kg	1.0	20	15	9.3
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
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	< 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	< 5.0	< 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

Results - Soil

Project: Herbert Road

Client: Terra Firma (Wales) Ltd		Chemtest Job No.:		20-29585	20-29585	20-29585
Quotation No.:		Chemtest Sample ID.:		1089899	1089900	1089901
Order No.: 123032RH		Client Sample Ref.:		PLOTS 76-81B TS2	PLOTS 82-87 TS2	PLOTS 88-93 TS2
		Client Sample ID.:		PLOTS 76-81B TS2	PLOTS 82-87 TS2	PLOTS 88-93 TS2
		Sample Type:		SOIL	SOIL	SOIL
		Date Sampled:		29-Oct-2020	29-Oct-2020	29-Oct-2020
		Time Sampled:		12:00	12:00	12:00
		Asbestos Lab:		DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD		
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	< 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
Naphthalene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	< 0.10	0.78
Anthracene	M	2700	mg/kg	0.10	< 0.10	0.18
Fluoranthene	M	2700	mg/kg	0.10	0.96	0.52
Pyrene	M	2700	mg/kg	0.10	0.42	0.39
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10	< 0.10
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30
Organic Matter BS1377	N	2930	%	0.10	3.9	4.0

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
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline 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.
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.
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.
2930	Organic Matter	Organic Matter	Acid Dichromate digestion/Titration

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"

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