Appendix 1 – Soil Sample Results

UKAS TESTING 2531

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

CHEMTECH environmental part of Cawood

ANALYTICAL TEST REPORT

Contract no:	134230
Contract name:	Standard Soil Suite
Client reference:	Chapel St
Clients name:	Martin Environmental Solutions
Clients address:	14 Hermitage Way Lytham St Annes FY8 4FX
Samples received:	12 June 2024
Analysis started:	12 June 2024
Analysis completed:	21 June 2024
Report issued:	21 June 2024

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

ANeasham-Bourn

Abbie Neasham-Bourn
Senior Reporting Administrator

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CE709 Test Report Issue 35, issued 22 January 2024

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
134230-1	TP1A	0.45	Loamy Clay with Gravel	-	-	22.8
134230-2	TP2A	0.45	Loamy Clay with Gravel	-	-	24.7
134230-3	TP3A	0.30	Loamy Clay with Gravel	-	-	17
134230-4	TP3B	0.60	Loamy Clay	-	-	16.2
134230-5	TP4A	0.45	Loamy Clay with Gravel	-	-	16.6
134230-6	TP5A	0.25	Sand with Gravel	-	-	24
134230-7	TP5B	0.55	Loamy Clay with Gravel	-	-	19.5
134230-8	TP6A	0.30	Loamy Clay with Gravel	-	-	18
134230-9	TP7A	0.30	Sandy Clay with Gravel	-	-	18.1
134230-10	TP8A	0.30	Loamy Clay with Gravel	-	-	16.5
134230-11	TP8B	0.60	Sand with Gravel	-	-	3.4
134230-12	TP9A	0.30	Sand with Gravel	-	-	32.6
134230-13	TP10A	0.30	Sand with Gravel	-	-	14.8
134230-14	TP11A	0.55	Sand with Gravel	-	-	28
134230-15	TP12A	0.60	Sand with Gravel	-	-	20.6
134230-16	TP13A	0.45	Loamy Clay with Gravel	-	-	18.3
134230-17	TP14A	0.40	Loamy Clay with Gravel	-	-	17.3
134230-18	TP15A	0.30	Sandy Clay with Gravel	-	-	17.8
134230-19	TP16A	0.55	Sand with Gravel	-	-	15.7
134230-20	TP17A	0.30	Sand with Gravel	-	-	14.2
134230-21	TP18A	0.35	Loamy Clay with Gravel	-	-	11.6

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SOILS

Lab number			134230-1	134230-2	134230-3	134230-4	134230-5	134230-6	134230-7	134230-8	134230-9
Sample id			TP1A	TP2A	TP3A	TP3B	TP4A	TP5A	TP5B	TP6A	TP7A
Depth (m)			0.45	0.45	0.30	0.60	0.45	0.25	0.55	0.30	0.30
Date sampled			08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024
Test	**Method**	**Units**									
Arsenic (total)	CE264[M]	mg/kg As	13.7	15.0	16.8	14.7	37.0	24.8	14.1	12.0	24.3
Cadmium (total)	CE264[M]	mg/kg Cd	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6
Chromium (total)	CE264[U]	mg/kg Cr	49.0	43.2	45.3	44.1	56.3	46.8	38.3	41.1	60.6
Copper (total)	CE264[M]	mg/kg Cu	108.8	71.4	74.5	58.8	104.6	337.7	75.7	35.6	94.8
Lead (total)	CE264[U]	mg/kg Pb	82.7	84.5	173.1	108.8	102.4	128.7	210.4	72.5	1414.2
Mercury (total)	CE264[U]	mg/kg Hg	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Nickel (total)	CE264[M]	mg/kg Ni	34.7	20.2	28.0	25.8	40.5	58.5	33.4	34.4	32.4
Selenium (total)	CE264	mg/kg Se	<3	<3	<3	<3	<3	<3	<3	<3	<3
Zinc (total)	CE264[M]	mg/kg Zn	123.1	60.6	87.9	75.9	143.7	243.2	92.0	224.9	183.2
Total Organic Carbon (TOC)	CE197	% w/w C	4.2	3.7	3.9	2.9	6.8	20.9	2.5	1.7	4.6
Estimate of OMC (calculated from TOC)	CE197	% w/w	7.2	6.3	6.7	4.9	11.8	36.0	4.4	2.8	7.9
PAH											
Naphthalene	CE087[M]	mg/kg	<0.02	0.03	0.08	0.04	0.11	0.24	<0.02	<0.02	0.77
Acenaphthylene	CE087[M]	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	0.26
Acenaphthene	CE087[M]	mg/kg	0.04	0.05	0.19	0.03	0.27	0.09	<0.02	<0.02	0.50
Fluorene	CE087[U]	mg/kg	0.03	0.04	0.12	0.03	0.18	0.06	<0.02	<0.02	0.37
Phenanthrene	CE087[M]	mg/kg	0.31	0.45	1.82	0.30	2.78	0.93	0.03	0.23	4.88
Anthracene	CE087[U]	mg/kg	0.07	0.09	0.45	0.08	1.09	0.23	<0.02	0.06	1.07
Fluoranthene	CE087[M]	mg/kg	0.38	0.66	3.09	0.62	4.19	1.78	0.05	0.41	6.17
Pyrene	CE087[M]	mg/kg	0.39	0.70	3.16	0.69	4.84	1.83	0.05	0.44	6.15
Benzo(a)anthracene	CE087[U]	mg/kg	0.19	0.37	1.63	0.37	2.42	0.94	0.02	0.22	2.76
Chrysene	CE087[M]	mg/kg	0.22	0.43	1.59	0.43	2.29	0.92	<0.03	0.24	3.23
Benzo(b)fluoranthene	CE087[M]	mg/kg	0.20	0.39	1.71	0.40	3.16	1.18	<0.02	0.20	2.92
Benzo(k)fluoranthene	CE087[M]	mg/kg	0.07	0.16	0.59	0.13	1.14	0.41	<0.03	0.09	1.04
Benzo(a)pyrene	CE087[U]	mg/kg	0.16	0.33	1.47	0.34	3.50	1.03	<0.02	0.18	2.46
Indeno(123cd)pyrene	CE087[M]	mg/kg	0.11	0.22	0.85	0.21	2.52	0.77	<0.02	0.12	1.52
Dibenz(ah)anthracene	CE087[M]	mg/kg	0.03	0.05	0.18	0.05	0.44	0.16	<0.02	0.03	0.31
Benzo(ghi)perylene	CE087[M]	mg/kg	0.11	0.21	0.91	0.21	2.41	0.78	<0.02	0.11	1.54
PAH (total of USEPA 16)	CE087	mg/kg	2.31	4.16	17.9	3.93	31.4	11.5	<0.34	2.33	36.0
BTEX & TPH											
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<0.6	<0.6	1	1	4	2	<0.6	2	4
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	<1	1	3	2	14	7	<1	5	16
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	<1.5	<1.5	3	<1.5	61	6	<1.5	10	53
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	<4.6	<4.5	13	8	218	26	<4.5	29	148
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	<2	<2	2	<2	64	6	<2	7	39
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<1	<1	<1	<1	2	2	<1	<1	1
EPH Aliphatic (>C12-C16)	CE250	mg/kg	1	<0.5	2	1	5	19	1	3	4
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<3	<3	<3	<3	21	4	<3	5	10
EPH Aliphatic (>C35-C44)	CE250	mg/kg	<0.51	<0.51	<0.5	<0.5	5	<0.5	<0.5	<0.51	2
Subcontracted Analysis											
Asbestos (qualitative)	$	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD

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SOILS

Lab number			134230-10	134230-11	134230-12	134230-13	134230-14	134230-15	134230-16	134230-17	134230-18
Sample id			TP8A	TP8B	TP9A	TP10A	TP11A	TP12A	TP13A	TP14A	TP15A
Depth (m)			0.30	0.60	0.30	0.30	0.55	0.60	0.45	0.40	0.30
Date sampled			08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024
Test	**Method**	**Units**									
Arsenic (total)	CE264[M]	mg/kg As	13.6	25.1	15.2	18.5	47.8	28.9	10.7	24.8	35.1
Cadmium (total)	CE264[M]	mg/kg Cd	<1.6	<1.6	<1.6	2.2	2.6	2.6	<1.6	<1.6	2.7
Chromium (total)	CE264[U]	mg/kg Cr	47.6	67.5	24.2	78.9	52.3	66.0	40.4	59.9	171.3
Copper (total)	CE264[M]	mg/kg Cu	47.6	83.9	225.3	152.7	357.3	196.1	65.7	69.8	1241.2
Lead (total)	CE264[U]	mg/kg Pb	264.5	358.9	248.4	553.3	753.6	655.4	160.1	139.6	541.1
Mercury (total)	CE264[U]	mg/kg Hg	<0.7	<0.7	<0.7	6.3	2.7	1.2	<0.7	1.6	<0.7
Nickel (total)	CE264[M]	mg/kg Ni	38.1	36.1	24.2	72.9	68.2	86.8	37.5	45.1	2382.0
Selenium (total)	CE264	mg/kg Se	<3	<3	<3	<3	<3	<3	<3	<3	<3
Zinc (total)	CE264[M]	mg/kg Zn	103.1	93.0	513.9	269.8	771.1	728.8	130.1	146.9	340.2
Total Organic Carbon (TOC)	CE197	% w/w C	1.8	5.4	32.4	8.3	24.7	8.8	5.8	4.4	6.1
Estimate of OMC (calculated from TOC)	CE197	% w/w	3.0	9.3	55.9	14.2	42.7	15.1	9.9	7.6	10.5
PAH											
Naphthalene	CE087[M]	mg/kg	0.48	0.12	2.88	1.03	2.45	0.85	5.52	<0.02	0.34
Acenaphthylene	CE087[M]	mg/kg	2.25	0.06	<0.02	0.48	<0.02	<0.02	15.14	<0.02	0.11
Acenaphthene	CE087[M]	mg/kg	1.09	0.15	6.22	1.78	8.13	1.58	9.00	0.03	0.08
Fluorene	CE087[U]	mg/kg	1.95	0.11	3.95	1.36	6.82	1.24	23.45	0.03	0.06
Phenanthrene	CE087[M]	mg/kg	17.60	1.28	29.17	11.88	64.76	10.04	131.83	0.28	0.91
Anthracene	CE087[U]	mg/kg	4.13	0.25	7.51	3.07	21.08	2.75	39.36	0.10	0.32
Fluoranthene	CE087[M]	mg/kg	16.67	2.39	28.63	17.66	117.57	15.15	136.66	0.41	1.55
Pyrene	CE087[M]	mg/kg	16.66	2.61	27.13	18.28	109.95	14.04	140.99	0.42	1.51
Benzo(a)anthracene	CE087[U]	mg/kg	7.31	1.26	10.84	8.47	50.50	7.10	63.58	0.25	0.76
Chrysene	CE087[M]	mg/kg	7.94	1.38	11.96	9.28	53.85	7.55	67.24	0.27	0.77
Benzo(b)fluoranthene	CE087[M]	mg/kg	7.47	1.26	11.98	9.57	54.76	7.00	58.08	0.27	1.22
Benzo(k)fluoranthene	CE087[M]	mg/kg	3.20	0.47	4.75	3.38	22.47	2.74	22.41	0.11	0.39
Benzo(a)pyrene	CE087[U]	mg/kg	6.98	1.14	10.52	8.12	44.62	6.51	49.76	0.24	0.89
Indeno(123cd)pyrene	CE087[M]	mg/kg	4.18	0.66	6.78	4.88	36.05	3.86	28.84	0.18	1.08
Dibenz(ah)anthracene	CE087[M]	mg/kg	0.94	0.14	1.14	1.03	6.15	0.75	7.92	0.03	0.18
Benzo(ghi)perylene	CE087[M]	mg/kg	4.31	0.65	6.21	4.82	31.43	3.57	29.09	0.17	1.11
PAH (total of USEPA 16)	CE087	mg/kg	103	13.9	170	105	631	84.7	829	2.79	11.3
BTEX & TPH											
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	6	1	10	6	34	6	12	1	54
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	38	4	37	21	144	33	146	3	143
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	216	10	103	73	709	254	584	5	748
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	521	17	129	659	1425	423	957	24	1724
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	121	3	22	155	250	51	196	7	169
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	2	<1	2	2	16	2	2	<1	18
EPH Aliphatic (>C12-C16)	CE250	mg/kg	7	1	3	4	32	8	9	1	47
EPH Aliphatic (>C16-C35)	CE250	mg/kg	97	<3	14	544	114	117	37	3	1325
EPH Aliphatic (>C35-C44)	CE250	mg/kg	9	<0.51	1	48	10	2	7	<0.5	12
Subcontracted Analysis											
Asbestos (qualitative)	$	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD

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SOILS

Lab number			134230-19	134230-20	134230-21
Sample id			TP16A	TP17A	TP18A
Depth (m)			0.55	0.30	0.35
Date sampled			08/06/2024	08/06/2024	08/06/2024
Test	**Method**	**Units**			
Arsenic (total)	CE264[M]	mg/kg As	31.4	11.9	19.6
Cadmium (total)	CE264[M]	mg/kg Cd	<1.6	<1.6	1.9
Chromium (total)	CE264[U]	mg/kg Cr	49.4	46.2	59.4
Copper (total)	CE264[M]	mg/kg Cu	261.3	107.5	119.8
Lead (total)	CE264[U]	mg/kg Pb	379.3	120.5	180.5
Mercury (total)	CE264[U]	mg/kg Hg	<0.7	<0.7	1.2
Nickel (total)	CE264[M]	mg/kg Ni	328.6	27.5	39.2
Selenium (total)	CE264	mg/kg Se	<3	<3	<3
Zinc (total)	CE264[M]	mg/kg Zn	246.4	276.4	231.4
Total Organic Carbon (TOC)	CE197	% w/w C	7.0	3.9	5.1
Estimate of OMC (calculated from TOC)	CE197	% w/w	12.0	6.6	8.9
PAH					
Naphthalene	CE087 [M]	mg/kg	0.21	0.11	0.93
Acenaphthylene	CE087 [M]	mg/kg	0.18	0.06	<0.02
Acenaphthene	CE087 [M]	mg/kg	0.64	0.15	2.36
Fluorene	CE087 [U]	mg/kg	0.39	0.12	1.02
Phenanthrene	CE087 [M]	mg/kg	4.32	0.99	10.22
Anthracene	CE087 [U]	mg/kg	1.07	0.27	1.74
Fluoranthene	CE087 [M]	mg/kg	8.22	2.10	12.36
Pyrene	CE087 [M]	mg/kg	9.10	2.32	12.02
Benzo(a)anthracene	CE087 [U]	mg/kg	4.09	1.18	5.34
Chrysene	CE087 [M]	mg/kg	4.52	1.29	5.49
Benzo(b)fluoranthene	CE087 [M]	mg/kg	4.86	1.41	5.54
Benzo(k)fluoranthene	CE087 [M]	mg/kg	1.84	0.53	1.95
Benzo(a)pyrene	CE087 [U]	mg/kg	4.26	1.32	4.87
Indeno(123cd)pyrene	CE087 [M]	mg/kg	3.03	0.90	3.15
Dibenz(ah)anthracene	CE087 [M]	mg/kg	0.52	0.21	0.60
Benzo(ghi)perylene	CE087 [M]	mg/kg	2.73	0.89	2.80
PAH (total of USEPA 16)	CE087	mg/kg	50.0	13.8	70.4
BTEX & TPH					
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	6	5	5
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	28	13	26
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	235	37	98
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	422	387	250
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	54	150	37
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	2	6	3
EPH Aliphatic (>C12-C16)	CE250	mg/kg	5	5	4
EPH Aliphatic (>C16-C35)	CE250	mg/kg	116	188	55
EPH Aliphatic (>C35-C44)	CE250	mg/kg	2	15	2
Subcontracted Analysis					
Asbestos (qualitative)	$	-	NAD	NAD	NAD

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE001	Moisture Content	Gravimetry, reported on Wet Weight basis	As received		0.1	% w/w
CE264	Arsenic (total)	Aqua Regia Extraction, ICPOES	Dry	M	1.8	mg/kg As
CE264	Cadmium (total)	Aqua Regia Extraction, ICPOES	Dry	M	1.6	mg/kg Cd
CE264	Chromium (total)	Aqua Regia Extraction, ICPOES	Dry	U	2	mg/kg Cr
CE264	Copper (total)	Aqua Regia Extraction, ICPOES	Dry	M	1.6	mg/kg Cu
CE264	Lead (total)	Aqua Regia Extraction, ICPOES	Dry	U	2.3	mg/kg Pb
CE264	Mercury (total)	Aqua Regia Extraction, ICPOES	Dry	U	0.7	mg/kg Hg
CE264	Nickel (total)	Aqua Regia Extraction, ICPOES	Dry	M	2.1	mg/kg Ni
CE264	Selenium (total)	Aqua Regia Extraction, ICPOES	Dry	U	3	mg/kg Se
CE264	Zinc (total)	Aqua Regia Extraction, ICPOES	Dry	M	4	mg/kg Zn
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.016	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.015	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.013	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.013	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.014	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.017	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.017	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.016	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.012	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.028	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.025	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.019	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.019	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.017	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.019	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.028	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		0.6	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1.5	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		4.5	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		2	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		3	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		0.5	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

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DEVIATING SAMPLE INFORMATION

Comments
Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
134230-1	TP1A	0.45	N	
134230-2	TP2A	0.45	N	
134230-3	TP3A	0.30	N	
134230-4	TP3B	0.60	N	
134230-5	TP4A	0.45	N	
134230-6	TP5A	0.25	N	
134230-7	TP5B	0.55	N	
134230-8	TP6A	0.30	N	
134230-9	TP7A	0.30	N	
134230-10	TP8A	0.30	N	
134230-11	TP8B	0.60	N	
134230-12	TP9A	0.30	N	
134230-13	TP10A	0.30	N	
134230-14	TP11A	0.55	N	
134230-15	TP12A	0.60	N	
134230-16	TP13A	0.45	N	
134230-17	TP14A	0.40	N	
134230-18	TP15A	0.30	N	
134230-19	TP16A	0.55	N	
134230-20	TP17A	0.30	N	
134230-21	TP18A	0.35	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Soil/Solid samples will be disposed of 4 weeks from initial receipt unless otherwise agreed.

Waters and leachate samples will be disposed of 2 weeks from report issue unless otherwise agreed.

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For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

Moisture Content Calculated on a Wet Weight basis

Lab number			134230-1	134230-2	134230-3	134230-4	134230-5	134230-6	134230-7	134230-8	134230-9	134230-10	134230-11	134230-12	134230-13	134230-14	134230-15	134230-16	134230-17	134230-18	134230-19	134230-20	134230-21
Sample id			TP1A	TP2A	TP3A	TP3B	TP4A	TP5A	TP5B	TP6A	TP7A	TP8A	TP8B	TP9A	TP10A	TP11A	TP12A	TP13A	TP14A	TP15A	TP16A	TP17A	TP18A
Depth (m)			0.45	0.45	0.30	0.60	0.45	0.25	0.55	0.30	0.30	0.30	0.60	0.30	0.30	0.55	0.60	0.45	0.40	0.30	0.55	0.30	0.35
Date sampled			08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024	08/06/2024
Test	**Method**	**Units**																					
Arsenic (total)	CE264M	mg/kg As	13.7	15.0	16.8	14.7	37.0	24.8	14.1	12.0	24.3	13.6	25.1	15.2	18.5	47.8	28.9	10.7	24.8	35.1	31.4	11.9	19.6
Cadmium (total)	CE264M	mg/kg Cd	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	2.2	2.6	2.6	<1.6	<1.6	2.7	<1.6	<1.6	1.9
Chromium (total)	CE264U	mg/kg Cr	49.0	43.2	45.3	44.1	56.3	46.8	38.3	41.1	60.6	47.6	67.5	24.2	78.9	52.3	66.0	40.4	59.9	171.3	49.4	46.2	59.4
Copper (total)	CE264M	mg/kg Cu	108.8	71.4	74.5	58.8	104.6	337.7	75.7	35.6	94.8	47.6	83.9	225.3	152.7	357.3	196.1	65.7	69.8	1241.2	261.3	107.5	119.8
Lead (total)	CE264U	mg/kg Pb	82.7	84.5	173.1	108.8	102.4	128.7	210.4	72.5	1414.2	264.5	358.9	248.4	553.3	753.6	655.4	160.1	139.6	541.1	379.3	120.5	180.5
Mercury (total)	CE264U	mg/kg Hg	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	6.3	2.7	1.2	<0.7	1.6	<0.7	<0.7	<0.7	1.2
Nickel (total)	CE264M	mg/kg Ni	34.7	20.2	28.0	25.8	40.5	58.5	33.4	34.4	32.4	38.1	36.1	24.2	72.9	68.2	86.8	37.5	45.1	2382.0	328.6	27.5	39.2
Selenium (total)	CE264	mg/kg Se	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Zinc (total)	CE264M	mg/kg Zn	123.1	60.6	87.9	75.9	143.7	243.2	92.0	224.9	183.2	103.1	93.0	513.9	269.8	771.1	728.8	130.1	146.9	340.2	246.4	276.4	231.4
Total Organic Carbon (TOC)	CE197	% w/w C	4.2	3.7	3.9	2.9	6.8	20.9	2.5	1.7	4.6	1.8	5.4	32.4	8.3	24.7	8.8	5.8	4.4	6.1	7.0	3.9	5.1
Estimate of OMC (calculated from TOC)	CE197	% w/w	7.2	6.3	6.7	4.9	11.8	36.0	4.4	2.8	7.9	3.0	9.3	55.9	14.2	42.7	15.1	9.9	7.6	10.5	12.0	6.6	8.9
PAH																							
Naphthalene	CE087 M	mg/kg	<0.02	0.03	0.08	0.04	0.11	0.24	<0.02	<0.02	0.77	0.48	0.12	2.88	1.03	2.45	0.85	5.52	<0.02	0.34	0.21	0.11	0.93
Acenaphthylene	CE087 M	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	0.09	<0.02	<0.02	0.26	2.25	0.06	<0.02	0.48	<0.02	<0.02	15.14	<0.02	0.11	0.18	0.06	<0.02
Acenaphthene	CE087 M	mg/kg	0.04	0.05	0.19	0.03	0.27	0.09	<0.02	<0.02	0.50	1.09	0.15	6.22	1.78	8.13	1.58	9.00	0.03	0.08	0.64	0.15	2.36
Fluorene	CE087 U	mg/kg	0.03	0.04	0.12	0.03	0.18	0.06	<0.02	<0.02	0.37	1.95	0.11	3.95	1.36	6.82	1.24	23.45	0.03	0.06	0.39	0.12	1.02
Phenanthrene	CE087 M	mg/kg	0.31	0.45	1.82	0.30	2.78	0.93	0.03	0.23	4.88	17.60	1.28	29.17	11.88	64.76	10.04	131.83	0.28	0.91	4.32	0.99	10.22
Anthracene	CE087 U	mg/kg	0.07	0.09	0.45	0.08	1.09	0.23	<0.02	0.06	1.07	4.13	0.25	7.51	3.07	21.08	2.75	39.36	0.10	0.32	1.07	0.27	1.74
Fluoranthene	CE087 M	mg/kg	0.38	0.66	3.09	0.62	4.19	1.78	0.05	0.41	6.17	16.67	2.39	28.63	17.66	117.57	15.15	136.66	0.41	1.55	8.22	2.10	12.36
Pyrene	CE087 M	mg/kg	0.39	0.70	3.16	0.69	4.84	1.83	0.05	0.44	6.15	16.66	2.61	27.13	18.28	109.95	14.04	140.99	0.42	1.51	9.10	2.32	12.02
Benzo(a)anthracene	CE087 U	mg/kg	0.19	0.37	1.63	0.37	2.42	0.94	0.02	0.22	2.76	7.31	1.26	10.84	8.47	50.50	7.10	63.58	0.25	0.76	4.09	1.18	5.34
Chrysene	CE087 M	mg/kg	0.22	0.43	1.59	0.43	2.29	0.92	<0.03	0.24	3.23	7.94	1.38	11.96	9.28	53.85	7.55	67.24	0.27	0.77	4.52	1.29	5.49
Benzo(b)fluoranthene	CE087 M	mg/kg	0.20	0.39	1.71	0.40	3.16	1.18	<0.02	0.20	2.92	7.47	1.26	11.98	9.57	54.76	7.00	58.08	0.27	1.22	4.86	1.41	5.54
Benzo(k)fluoranthene	CE087 M	mg/kg	0.07	0.16	0.59	0.13	1.14	0.41	<0.03	0.09	1.04	3.20	0.47	4.75	3.38	22.47	2.74	22.41	0.11	0.39	1.84	0.53	1.95
Benzo(a)pyrene	CE087 U	mg/kg	0.16	0.33	1.47	0.34	3.50	1.03	<0.02	0.18	2.46	6.98	1.14	10.52	8.12	44.62	6.51	49.76	0.24	0.89	4.26	1.32	4.87
Indeno(123cd)pyrene	CE087 M	mg/kg	0.11	0.22	0.85	0.21	2.52	0.77	<0.02	0.12	1.52	4.18	0.66	6.78	4.88	36.05	3.86	28.84	0.18	1.08	3.03	0.90	3.15
Dibenz(ah)anthracene	CE087 M	mg/kg	0.03	0.05	0.18	0.05	0.44	0.16	<0.02	0.03	0.31	0.94	0.14	1.14	1.03	6.15	0.75	7.92	0.03	0.18	0.52	0.21	0.60
Benzo(ghi)perylene	CE087 M	mg/kg	0.11	0.21	0.91	0.21	2.41	0.78	<0.02	0.11	1.54	4.31	0.65	6.21	4.82	31.43	3.57	29.09	0.17	1.11	2.73	0.89	2.80
PAH (total of USEPA 16)	CE087	mg/kg	2.31	4.16	17.9	3.93	31.4	11.5	<0.34	2.33	36.0	103	13.9	170	105	631	84.7	829	2.79	11.3	50.0	13.8	70.4

BTEX & TPH																								
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<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
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<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
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<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
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<0.6	<0.6	1	1	4	2	<0.6	2	4	6	1	10	6	34	6	12	1	54	6	5	5	
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	<1	1	3	2	14	7	<1	5	16	38	4	37	21	144	33	146	3	143	28	13	26	
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	<1.5	<1.5	3	<1.5	61	6	<1.5	10	53	216	10	103	73	709	254	584	5	748	235	37	98	
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	<4.6	<4.5	13	8	218	26	<4.5	29	148	521	17	129	659	1425	423	957	24	1724	422	387	250	
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	<2	<2	2	<2	64	6	<2	7	39	121	3	22	155	250	51	196	7	169	54	150	37	
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<1	<1	<1	<1	2	2	<1	<1	1	2	<1	2	2	16	2	2	<1	18	2	6	3	
EPH Aliphatic (>C12-C16)	CE250	mg/kg	1	<0.5	2	1	5	19	1	3	4	7	1	3	4	32	8	9	1	47	5	5	4	
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<3	<3	<3	<3	21	4	<3	5	10	97	<3	14	544	114	117	37	3	1325	116	188	55	
EPH Aliphatic (>C35-C44)	CE250	mg/kg	<0.51	<0.51	<0.5	<0.5	5	<0.5	<0.5	<0.51	2	9	<0.51	1	48	10	2	7	<0.5	12	2	15	2	
Subcontracted Analysis																								
Asbestos (qualitative)	$	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	
Form of Asbestos	$	-																						
Asbestos (quantitative)	$	% w/w																						

Appendix 2 – Trail pit logs

TP1 – North east rear corner, proposed rear garden









Trail pit 1 – northeast corner	
0.00-0.25m	brick stone gravel loamy clay, stiff orange clay with gravel at 250mm,
0.25-0.80m	loamy clay, gravel, stone, brick

TP2 – Middle northeast boundary proposed rear garden





Trail Pit 2 – Middle Northeast boundary	
0.00-0.20m	stone, brick gravel sandy
0.20-0.45m	loamy clay, gravel pebbles
0.45-0.90m	clay stiff orange.

TP3 – Southeast corner of site proposed rear garden





Trail Pit 3 – southeast corner of site, by site electrical inlet.

0.00-0.20m	Brick, rubble
0.20-0.40m	Gravel, loamy clay, some stone/brick
0.40-0.70m	Loamy Clay soil
0.70-0.90m	Clay – stiff orange.

TP4 – South boundary 1/3 across from east, in original 2nd yard area, under proposed house







Trail Pit 4 – east of entrance way to site.

0.00-0.40m	Cobbles and grit
0.40-0.45m	Loamy clay with gravel
0.45-0.80m	clay stiff – orange then darker in colour at 0.65m.

TP5 – centre 1/3 from east boundary, under proposed house









Trail Pit 5 – centre of site 1/3 from east boundary.

0.00-0.40m	Steon brick sand and gravel
0.40-0.60m	Loamy clay with gravel
0.60-0.90m	brick loamy clay with gravel.

TP6 – Northern boundary approx. 1/3 in from the east, under proposed house









Trail Pit 6 – centre 1/3 of Wy in from eastern boundary along the northern boundary.

0.00-0.20m	Cobbles and grit
0.20-0.50m	Loamy clay with gravel
0.50-0.80m	clay stiff

TP7 – Along northern boundary centre east, in roadway













Trail Pit 7 – centre east of site towards northern boundary.

0.00-0.10m	Asphalt and wood, some odour
0.10-0.30m	Foundations of former building and drain (some water from drain, no odour) Loamy clay with gravel
0.30-0.40m	Loamy clay and gravel, some brick

0.40m 'inside' former building footprint clay

0.80m 'outside' former building footprint clay

TP8 – Centre east along southern boundary, in roadway













Trail Pit 7 – centre 1/3 of Way in from eastern boundary along the southern boundary.

0.00-0.45m	Loamy clay with gravel, and stone. Brick wall from former building to one side
0.45-0.50	Layer of crushed brick
0.50-0.850m	sand and gravel
0.80-1.00m	clay stiff







