

Our Ref.: 10-015.01L

One17 SD Ltd
The Dyehouse
Armitage Bridge
Huddersfield
West Yorkshire
HD4 7PD

4th November 2011

Dear Michael,

RE: Hinchliffe Mill, Water Street

This Letter Report is an addendum to the Phase 2 Ground Investigation Report (GIR) (Project No.: 10-015, October 2011) undertaken for the proposed development at the above location and should be read in conjunction with the original report.

Please find enclosed:

- Chemtech Environmental Analytical Report (ARC/43302(3))

Following the results of the Asbestos screening completed on a number of made ground samples obtained from the ground investigation, the presence of Chrysotile was identified within one sample (BH4). In order to quantify the Chrysotile present, it was recommended that further quantitative Asbestos screening was undertaken to determine the potential risks to human health and whether remediation would be required.

The results of the testing has identified <0.001% *w/w* of Asbestos within the sample tested. Whilst there are no assessment values for Asbestos, this result suggests a very low potential risk to human health.

It is therefore felt that the results of the original screening has identified an isolated occurrence of a fibre within the sample screened, and as such is not considered to be representative of heavy or gross Asbestos contamination within the made ground as a whole.

Consequently, there is not a requirement for removal, treatment, protection measures and/or further risk assessment (DQRA), in order to protect the future end users (i.e. no risk to human health) from potential Asbestos within the made ground, and as such there is no requirement for this to be included within the Remediation Strategy required for this site.

I trust the information we have provided to you is to your satisfaction. However if you require any further information or clarification, please do not hesitate to contact us.

Yours sincerely

For and on behalf of Arc Environmental Ltd

Richard Stripp *BSc. (Hons) MSc. FGS*
Geo-Environmental Engineer



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ANALYTICAL TEST REPORT

Contract no: 43302(3)
Contract name: Hinchliffe Mill, Water Street
Client reference: 10-015
Clients name: ARC Environmental
Clients address: The Rivergreen Centre
Aykley Heads
Durham
DH1 5TS
Samples received: 02 September 2011
Analysis started: 02 September 2011
Analysis completed: 21 October 2011
Report issued: 26 October 2011

This is a supplementary report to report number 43302(2) issued 28 September 2011.

Notes: Opinions and interpretations expressed herein are outside the UKAS accreditation scope. Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling. Methods, procedures and performance data are available on request. Results reported herein relate only to the material supplied to the laboratory. BTEX compounds are identified by retention time only and may include interference from co-eluting compounds. This report shall not be reproduced except in full, without prior written approval. Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

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
NAF Non-Asbestos Fibre

Approved by:

Karan Campbell
Director

John Campbell
Director

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.

All results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.
Analytical results are exclusive of stones.

Lab ref	Sample id	Depth (m)	Soil description passing 2mm sieve	Description of material retained on 2mm sieve	% Retained on 2mm sieve	Moisture (%)
43302-2	BH 3	0.40	Sand	Stones, Brick & Tar	85.8	7.7
43302-3	BH 4	0.40	Sand	Stones & Gravel	76.4	7.5
43302-5	BH 8	0.20	Ashy Sand	Stones, Clinker & Gravel	71.6	8.2
43302-6	BH 9	0.20-1.00	Silty Sandy Clay	Stones & Gravel	54.0	10.3
43302-7	BH 11	0.20	Ashy Sand	Stones & Clinker	75.2	12.6
43302-8	BH 13	1.50	Sandy Clay	N/A	<1	37.5
43302-9	TP 1A	0.00-0.50	Sand	Shale	80.0	9.2
43302-10	TP 1B	0.00-0.35	Ashy Sand	Stones, Clinker & Gravel	66.1	11.7
43302-11	TP 1B	0.35-0.60	Ashy Sand	Stones & Clinker	68.3	15.2
43302-12	TP 1B	0.60-1.00	Loamy Clay	N/A	<1	19.5
43302-13	TP 2A	0.00-1.00	Ashy Sand	Stones, Clinker & Shale	56.6	16.8
43302-14	TP 3	0.00-0.35	Ashy Clayey Sand	Stones, Metal, Clinker & Gravel	73.7	12.7
43302-15	TP 6	0.00-0.65	Sand	Stones & Gravel	71.8	9.0
43302-16	TP 7	0.00-0.40	Sand	Stones & Gravel	69.6	6.4
43302-17	TP 9	0.00-0.60	Clayey Sand	Stones & Gravel	48.5	10.2
43302-18	TP 11	0.00-0.80	Clay	Stones & Gravel	21.4	17.7
43302-19	TP 12	0.00-0.80	Ashy Sand	Clinker	71.5	17.1
43302-20	TP 12	0.80-0.95	Ashy Sandy Clay	Gravel & Clinker	20.9	23.2
43302-21	TP 12	1.25-2.10	Sandy Clay	Gravel	7.7	21.4
43302-22	TP 13	0.10-0.40	Ashy Sand	Stones & Clinker	78.0	11.2

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SOILS

Lab number			43302-1	43302-2	43302-3	43302-4	43302-5	43302-6
Sample id			BH 1	BH 3	BH 4	BH 7	BH 8	BH 9
Depth (m)			0.50	0.40	0.40	0.10	0.20	0.20-1.00
Test	Method	Units						
Arsenic (total)	CE054 ^M	mg/kg As	-	3.1	21	-	20	5.2
Cadmium (total)	CE054 ^M	mg/kg Cd	-	0.3	0.6	-	0.8	0.6
Chromium (total)	CE054 ^M	mg/kg Cr	-	12	39	-	22	31
Chromium (III)	-	mg/kg CrIII	-	12	39	-	22	31
Chromium (VI)	CE050 ^U	mg/kg CrVI	-	<1	<1	-	<1	<1
Copper (total)	CE054 ^M	mg/kg Cu	-	24	67	-	83	26
Lead (total)	CE054 ^M	mg/kg Pb	-	20	63	-	241	25
Mercury (total)	CE054	mg/kg Hg	-	<0.5	<0.5	-	<0.5	<0.5
Nickel (total)	CE054 ^M	mg/kg Ni	-	9.1	30	-	36	20
Selenium (total)	CE054 ^M	mg/kg Se	-	<0.3	<0.3	-	<0.3	<0.3
Zinc (total)	CE054 ^M	mg/kg Zn	-	89	55	-	75	66
pH	CE004 ^M	units	-	8.5	8.5	-	8.4	5.4
Sulphate (2:1 water soluble)	CE049 ^U	mg/l SO ₄	-	66	96	-	136	108
Cyanide (free)	CE077	mg/kg CN	-	<2	<2	-	<2	<2
Phenols (total)	CE078	mg/kg PhOH	-	-	-	-	-	-
Total Organic Carbon	CE005 ^M	% w/w C	-	1.31	0.63	-	1.38	0.96
Organic matter content	CE005 ^M	% w/w	-	-	-	-	-	-
PAH								
Acenaphthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.8	<0.1
Benzo(a)pyrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9	<0.1
Benzo(b)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6	<0.1
Benzo(k)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9	<0.1
Dibenz(ah)anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	CE087	mg/kg	<0.1	<0.1	0.1	<0.1	2.1	<0.1
Fluorene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123cd)pyrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6	<0.1
Naphthalene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5	<0.1
Pyrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	2.5	<0.1
PAH (total of USEPA 16)	CE087	mg/kg	<5	<5	<5	<5	8.9	<5
Benzo(j)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH (total of OIL 8)	CE087	mg/kg	<5	<5	<5	<5	<5	<5

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SOILS

Lab number			43302-1	43302-2	43302-3	43302-4	43302-5	43302-6
Sample id			BH 1	BH 3	BH 4	BH 7	BH 8	BH 9
Depth (m)			0.50	0.40	0.40	0.10	0.20	0.20-1.00
Test	Method	Units						
BTEX & TPH								
Benzene	CE057 ^u	mg/kg	-	-	-	-	-	-
Toluene	CE057 ^u	mg/kg	-	-	-	-	-	-
Ethylbenzene	CE057 ^u	mg/kg	-	-	-	-	-	-
m & p-Xylene	CE057 ^u	mg/kg	-	-	-	-	-	-
o-Xylene	CE057 ^u	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC16-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC35-EC44	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC35-EC44	CE068	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos	\$	-	NAF	NAF	Chrysotile	NAF	-	-
Asbestos (quantitative)	\$	% w/w	-	-	<0.001	-	-	-

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SOILS

Lab number			43302-7	43302-8	43302-9	43302-10	43302-11	43302-12
Sample id			BH 11	BH 13	TP 1A	TP 1B	TP 1B	TP 1B
Depth (m)			0.20	1.50	0.00-0.50	0.00-0.35	0.35-0.60	0.60-1.00
Test	Method	Units						
Arsenic (total)	CE054 ^M	mg/kg As	19	-	18	35	194	8.2
Cadmium (total)	CE054 ^M	mg/kg Cd	0.5	-	0.9	0.7	0.6	0.5
Chromium (total)	CE054 ^M	mg/kg Cr	21	-	31	80	267	41
Chromium (III)	-	mg/kg CrIII	21	-	31	80	267	41
Chromium (VI)	CE050 ^U	mg/kg CrVI	<1	-	<1	<1	<1	<1
Copper (total)	CE054 ^M	mg/kg Cu	59	-	46	66	134	28
Lead (total)	CE054 ^M	mg/kg Pb	41	-	33	179	341	42
Mercury (total)	CE054	mg/kg Hg	<0.5	-	<0.5	<0.5	1.3	<0.5
Nickel (total)	CE054 ^M	mg/kg Ni	24	-	27	24	43	20
Selenium (total)	CE054 ^M	mg/kg Se	<0.3	-	<0.3	0.4	1.2	0.3
Zinc (total)	CE054 ^M	mg/kg Zn	56	-	66	104	67	97
pH	CE004 ^M	units	8.7	-	8.4	8.2	8.1	6.8
Sulphate (2:1 water soluble)	CE049 ^U	mg/l SO ₄	579	-	126	1361	562.0	48
Cyanide (free)	CE077	mg/kg CN	<2	-	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg PhOH	-	-	-	<0.5	<0.5	<0.5
Total Organic Carbon	CE005 ^M	% w/w C	0.94	-	0.45	2.53	2.94	1.34
Organic matter content	CE005 ^M	% w/w	-	3.31	-	-	-	-
PAH								
Acenaphthene	CE087	mg/kg	<0.1	-	-	6.5	<0.1	<0.1
Acenaphthylene	CE087	mg/kg	<0.1	-	-	<0.1	<0.1	<0.1
Anthracene	CE087	mg/kg	<0.1	-	-	14.9	0.5	0.1
Benzo(a)anthracene	CE087	mg/kg	<0.1	-	-	32.2	1.2	0.2
Benzo(a)pyrene	CE087	mg/kg	<0.1	-	-	24.9	1.1	<0.1
Benzo(b)fluoranthene	CE087	mg/kg	<0.1	-	-	38.2	1.9	<0.1
Benzo(ghi)perylene	CE087	mg/kg	<0.1	-	-	11.9	1.3	0.3
Benzo(k)fluoranthene	CE087	mg/kg	<0.1	-	-	14.3	<0.1	<0.1
Chrysene	CE087	mg/kg	<0.1	-	-	28.3	1.1	0.2
Dibenz(ah)anthracene	CE087	mg/kg	<0.1	-	-	<0.1	<0.1	<0.1
Fluoranthene	CE087	mg/kg	0.1	-	-	76.2	2.7	0.3
Fluorene	CE087	mg/kg	<0.1	-	-	3.8	<0.1	<0.1
Indeno(123cd)pyrene	CE087	mg/kg	<0.1	-	-	10.8	1.2	0.2
Naphthalene	CE087	mg/kg	<0.1	-	-	0.2	<0.1	<0.1
Phenanthrene	CE087	mg/kg	<0.1	-	-	42.3	0.9	0.1
Pyrene	CE087	mg/kg	<0.1	-	-	64.4	2.4	0.3
PAH (total of USEPA 16)	CE087	mg/kg	<5	-	-	369	14	<5
Benzo(j)fluoranthene	CE087	mg/kg	<0.1	-	-	4.2	<0.1	<0.1
PAH (total of OIL 8)	CE087	mg/kg	<5	-	-	153	6.5	<5

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SOILS

Lab number			43302-7	43302-8	43302-9	43302-10	43302-11	43302-12
Sample id			BH 11	BH 13	TP 1A	TP 1B	TP 1B	TP 1B
Depth (m)			0.20	1.50	0.00-0.50	0.00-0.35	0.35-0.60	0.60-1.00
Test	Method	Units						
BTEX & TPH								
Benzene	CE057 ^u	mg/kg	-	-	-	<0.01	<0.01	<0.01
Toluene	CE057 ^u	mg/kg	-	-	-	<0.01	<0.01	<0.01
Ethylbenzene	CE057 ^u	mg/kg	-	-	-	<0.01	<0.01	<0.01
m & p-Xylene	CE057 ^u	mg/kg	-	-	-	<0.01	<0.01	<0.01
o-Xylene	CE057 ^u	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	<0.01	<0.01	<0.01
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	5	3	<1
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	37	14	3
TPH Aliphatic EC16-EC35	CE068	mg/kg	-	-	-	3346	625	49
TPH Aliphatic EC35-EC44	CE068	mg/kg	-	-	-	412	43	<1
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	<0.1	<0.1	<0.1
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	<0.1	<0.1	<0.1
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	0.3	0.1	0.1
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	<1	<1	<1
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	10	<1	<1
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	210	8	1.0
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	162	10	1.0
TPH Aromatic EC35-EC44	CE068	mg/kg	-	-	-	15	2	<1
Subcontracted analysis								
Asbestos	\$	-	-	-	NAF	-	-	-
Asbestos (quantitative)	\$	% w/w	-	-	-	-	-	-

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SOILS

Lab number			43302-13	43302-14	43302-15	43302-16	43302-17	43302-18
Sample id			TP 2A	TP 3	TP 6	TP 7	TP 9	TP 11
Depth (m)			0.00-1.00	0.00-0.35	0.00-0.65	0.00-0.40	0.00-0.60	0.00-0.80
Test	Method	Units						
Arsenic (total)	CE054 ^M	mg/kg As	181	32	6.1	1.8	2.8	10
Cadmium (total)	CE054 ^M	mg/kg Cd	0.5	1.7	0.7	0.5	0.5	0.6
Chromium (total)	CE054 ^M	mg/kg Cr	31	80	23	16	24	36
Chromium (III)	-	mg/kg CrIII	31	80	23	16	24	36
Chromium (VI)	CE050 ^U	mg/kg CrVI	<1	<1	<1	<1	<1	<1
Copper (total)	CE054 ^M	mg/kg Cu	210	292	39	13	18	29
Lead (total)	CE054 ^M	mg/kg Pb	61	2659	46	8.7	13	22
Mercury (total)	CE054	mg/kg Hg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.3
Nickel (total)	CE054 ^M	mg/kg Ni	70	23	23	15	20	19
Selenium (total)	CE054 ^M	mg/kg Se	3.0	<0.3	<0.3	<0.3	<0.3	0.7
Zinc (total)	CE054 ^M	mg/kg Zn	53	703	100	50	52	45
pH	CE004 ^M	units	6.3	10.4	8.2	8.1	8.0	7.8
Sulphate (2:1 water soluble)	CE049 ^U	mg/l SO ₄	424	1660	117	13	142	35
Cyanide (free)	CE077	mg/kg CN	<2	<2	<2	<2	<2	<2
Phenols (total)	CE078	mg/kg PhOH	-	-	-	-	-	-
Total Organic Carbon	CE005 ^M	% w/w C	1.15	1.36	0.24	0.49	1.52	1.84
Organic matter content	CE005 ^M	% w/w	-	-	-	-	-	-
PAH								
Acenaphthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	CE087	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(ah)anthracene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Fluorene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(123cd)pyrene	CE087	mg/kg	<0.1	<0.1	0.2	<0.1	0.1	0.1
Naphthalene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH (total of USEPA 16)	CE087	mg/kg	<5	<5	<5	<5	<5	<5
Benzo(j)fluoranthene	CE087	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH (total of OIL 8)	CE087	mg/kg	<5	<5	<5	<5	<5	<5

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SOILS

Lab number			43302-13	43302-14	43302-15	43302-16	43302-17	43302-18
Sample id			TP 2A	TP 3	TP 6	TP 7	TP 9	TP 11
Depth (m)			0.00-1.00	0.00-0.35	0.00-0.65	0.00-0.40	0.00-0.60	0.00-0.80
Test	Method	Units						
BTEX & TPH								
Benzene	CE057 ^u	mg/kg	-	-	-	-	-	-
Toluene	CE057 ^u	mg/kg	-	-	-	-	-	-
Ethylbenzene	CE057 ^u	mg/kg	-	-	-	-	-	-
m & p-Xylene	CE057 ^u	mg/kg	-	-	-	-	-	-
o-Xylene	CE057 ^u	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC16-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aliphatic EC35-EC44	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC5-EC7	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	-	-	-	-	-
TPH Aromatic EC35-EC44	CE068	mg/kg	-	-	-	-	-	-
Subcontracted analysis								
Asbestos	\$	-	-	NAF	NAF	NAF	-	-
Asbestos (quantitative)	\$	% w/w	-	-	-	-	-	-

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SOILS

Lab number			43302-19	43302-20	43302-21	43302-22
Sample id			TP 12	TP 12	TP 12	TP 13
Depth (m)			0.00-0.80	0.80-0.95	1.25-2.10	0.10-0.40
Test	Method	Units				
Arsenic (total)	CE054 ^M	mg/kg As	17	-	-	21
Cadmium (total)	CE054 ^M	mg/kg Cd	9.3	-	-	0.5
Chromium (total)	CE054 ^M	mg/kg Cr	74	-	-	56
Chromium (III)	-	mg/kg CrIII	74	-	-	56
Chromium (VI)	CE050 ^U	mg/kg CrVI	<1	-	-	<1
Copper (total)	CE054 ^M	mg/kg Cu	739	-	-	107
Lead (total)	CE054 ^M	mg/kg Pb	1232	-	-	82
Mercury (total)	CE054	mg/kg Hg	<0.5	-	-	<0.5
Nickel (total)	CE054 ^M	mg/kg Ni	49	-	-	47
Selenium (total)	CE054 ^M	mg/kg Se	<0.3	-	-	<0.3
Zinc (total)	CE054 ^M	mg/kg Zn	663	-	-	62
pH	CE004 ^M	units	8.2	-	-	8.0
Sulphate (2:1 water soluble)	CE049 ^U	mg/l SO ₄	61	-	-	19
Cyanide (free)	CE077	mg/kg CN	<2	-	-	
Phenols (total)	CE078	mg/kg PhOH	-	<0.5	-	-
Total Organic Carbon	CE005 ^M	% w/w C	2.58	-	-	2.08
Organic matter content	CE005 ^M	% w/w	-	-	1.71	-
PAH						
Acenaphthene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Acenaphthylene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Anthracene	CE087	mg/kg	0.1	0.6	-	<0.1
Benzo(a)anthracene	CE087	mg/kg	0.7	1.2	-	<0.1
Benzo(a)pyrene	CE087	mg/kg	0.8	<0.1	-	<0.1
Benzo(b)fluoranthene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Benzo(ghi)perylene	CE087	mg/kg	0.6	<0.1	-	<0.1
Benzo(k)fluoranthene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Chrysene	CE087	mg/kg	0.7	1.1	-	<0.1
Dibenz(ah)anthracene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Fluoranthene	CE087	mg/kg	1.2	1.6	-	0.1
Fluorene	CE087	mg/kg	<0.1	<0.1	-	<0.1
Indeno(123cd)pyrene	CE087	mg/kg	0.5	0.1	-	0.1
Naphthalene	CE087	mg/kg	0.1	<0.1	-	0.1
Phenanthrene	CE087	mg/kg	0.7	1.1	-	0.2
Pyrene	CE087	mg/kg	1.1	2.2	-	0.2
PAH (total of USEPA 16)	CE087	mg/kg	6.5	7.9	-	<5
Benzo(j)fluoranthene	CE087	mg/kg	<0.1	<0.1	-	<0.1
PAH (total of OIL 8)	CE087	mg/kg	<5	<5	-	<5

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SOILS

Lab number			43302-19	43302-20	43302-21	43302-22
Sample id			TP 12	TP 12	TP 12	TP 13
Depth (m)			0.00-0.80	0.80-0.95	1.25-2.10	0.10-0.40
Test	Method	Units				
BTEX & TPH						
Benzene	CE057 ^u	mg/kg	-	<0.01	-	-
Toluene	CE057 ^u	mg/kg	-	<0.01	-	-
Ethylbenzene	CE057 ^u	mg/kg	-	<0.01	-	-
m & p-Xylene	CE057 ^u	mg/kg	-	<0.01	-	-
o-Xylene	CE057 ^u	mg/kg	-	<0.01	-	-
TPH Aliphatic EC5-EC6	CE068	mg/kg	-	<0.01	-	-
TPH Aliphatic EC6-EC8	CE068	mg/kg	-	<0.01	-	-
TPH Aliphatic EC8-EC10	CE068	mg/kg	-	<0.01	-	-
TPH Aliphatic EC10-EC12	CE068	mg/kg	-	2	-	-
TPH Aliphatic EC12-EC16	CE068	mg/kg	-	11	-	-
TPH Aliphatic EC16-EC35	CE068	mg/kg	-	4539	-	-
TPH Aliphatic EC35-EC44	CE068	mg/kg	-	<1	-	-
TPH Aromatic EC5-EC7	CE068	mg/kg	-	<0.1	-	-
TPH Aromatic EC7-EC8	CE068	mg/kg	-	<0.1	-	-
TPH Aromatic EC8-EC10	CE068	mg/kg	-	0.1	-	-
TPH Aromatic EC10-EC12	CE068	mg/kg	-	<1	-	-
TPH Aromatic EC12-EC16	CE068	mg/kg	-	<1	-	-
TPH Aromatic EC16-EC21	CE068	mg/kg	-	6	-	-
TPH Aromatic EC21-EC35	CE068	mg/kg	-	4	-	-
TPH Aromatic EC35-EC44	CE068	mg/kg	-	<1	-	-
Subcontracted analysis						
Asbestos	\$	-	NAF	-	-	-
Asbestos (quantitative)	\$	% w/w	-	-	-	-

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LEACHATES

Lab number			43302-5L	43302-6L	43302-10L	43302-11L	43302-12L	43302-13L
Sample id			BH 8	BH 9	TP 1B	TP 1B	TP 1B	TP 2A
Depth (m)			0.20	0.20-1.00	0.00-0.35	0.35-0.60	0.60-1.00	0.00-1.00
Test	Method	Units						
Arsenic (dissolved)	CE055	µg/l As	20	<1	11	11	-	<1
Boron (dissolved)	CE063	µg/l B	376	40	30	<30	-	31
Cadmium (dissolved)	CE055 ^U	µg/l Cd	<1	<1	<1	<1	-	<1
Chromium (dissolved)	CE055 ^U	µg/l Cr	6	<3	4	6	-	<3
Copper (dissolved)	CE055 ^U	µg/l Cu	<4	<4	<4	4	-	<4
Lead (dissolved)	CE055 ^U	µg/l Pb	<9	<9	<9	<9	-	<9
Mercury (dissolved)	CE055	µg/l Hg	<1	<1	<1	<1	-	<1
Nickel (dissolved)	CE055 ^U	µg/l Ni	7	<3	<3	<3	-	<3
Selenium (dissolved)	CE055	µg/l Se	4	<1	<1	1	-	<1
Zinc (dissolved)	CE055 ^U	µg/l Zn	<20	<20	<20	<20	-	<20
pH	CE004	units	9.3	5.9	9.1	8.7	-	6.7
Sulphate	CE049 ^U	mg/l SO ₄	13	18	176	44	-	42
Sulphide	CE079	µg/l S ²⁻	<100	<100	<100	<100	-	<100
Cyanide (free)	CE077	µg/l CN	<20	<20	<20	<20	-	<20
Phenols (total)	CE078	µg/l PhOH	-	-	<10	<10	<10	-
PAHs								
Acenaphthene	CE087	µg/l	<0.1	-	14.9	<0.1	<0.1	-
Acenaphthylene	CE087	µg/l	<0.1	-	<0.1	<0.1	<0.1	-
Anthracene	CE087	µg/l	<0.1	-	38.2	<0.1	<0.1	-
Benzo(a)anthracene	CE087	µg/l	<0.1	-	28.3	<0.1	<0.1	-
Benzo(a)pyrene	CE087	µg/l	<0.1	-	10.8	<0.1	<0.1	-
Benzo(b)fluoranthene	CE087	µg/l	<0.1	-	76.2	<0.1	<0.1	-
Benzo(ghi)perylene	CE087	µg/l	<0.1	-	64.4	<0.1	<0.1	-
Benzo(k)fluoranthene	CE087	µg/l	<0.1	-	3.8	<0.1	<0.1	-
Chrysene	CE087	µg/l	<0.1	-	<0.1	<0.1	<0.1	-
Dibenz(ah)anthracene	CE087	µg/l	<0.1	-	42.3	<0.1	<0.1	-
Fluoranthene	CE087	µg/l	<0.1	-	11.9	<0.1	<0.1	-
Fluorene	CE087	µg/l	<0.1	-	32.2	<0.1	<0.1	-
Indeno(123cd)pyrene	CE087	µg/l	<0.1	-	0.2	<0.1	<0.1	-
Naphthalene	CE087	µg/l	<0.1	-	6.5	<0.1	<0.1	-
Phenanthrene	CE087	µg/l	<0.1	-	24.9	<0.1	<0.1	-
Pyrene	CE087	µg/l	<0.1	-	14.3	<0.1	<0.1	-
PAH (total of USEPA 16)	CE087	µg/l	<0.1	-	369	<0.1	<0.1	-
Benzo(j)fluoranthene	CE087	µg/l	<0.1	-	4.2	<0.1	<0.1	-
PAH (total of OIL 8)	CE087	µg/l	<0.1	-	153	<0.1	<0.1	-

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LEACHATES

Lab number			43302-5L	43302-6L	43302-10L	43302-11L	43302-12L	43302-13L
Sample id			BH 8	BH 9	TP 1B	TP 1B	TP 1B	TP 2A
Depth (m)			0.20	0.20-1.00	0.00-0.35	0.35-0.60	0.60-1.00	0.00-1.00
Test	Method	Units						
TPH								
TPH (C5-C7)	CE067	µg/l	-	-	<1	<1	<1	-
TPH (C7-C8)	CE067	µg/l	-	-	<1	<1	<1	-
TPH (C8-C10)	CE067	µg/l	-	-	<1	<1	<1	-
TPH (C10-C12)	CE052	µg/l	-	-	<1	<1	<1	-
TPH (C12-C16)	CE052	µg/l	-	-	3	<1	<1	-
TPH (C16-C21)	CE052	µg/l	-	-	10	<1	<1	-
TPH (C21-C35)	CE052	µg/l	-	-	116	21	<1	-
TPH (C35-C44)	CE052	µg/l	-	-	4	<1	<1	-

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LEACHATES

Lab number			43302-14L	43302-15L	43302-18L	43302-19L	43302-20L	43302-22L
Sample id			TP 3	TP 6	TP 11	TP 12	TP 12	TP 13
Depth (m)			0.00-0.35	0.00-0.65	0.00-0.80	0.00-0.80	0.80-0.95	0.10-0.40
Test	Method	Units						
Arsenic (dissolved)	CE055	µg/l As	3	-	1	8	-	-
Boron (dissolved)	CE063	µg/l B	111	-	<30	<30	-	-
Cadmium (dissolved)	CE055 ^U	µg/l Cd	<1	-	<1	<1	-	-
Chromium (dissolved)	CE055 ^U	µg/l Cr	31	-	<3	6	-	-
Copper (dissolved)	CE055 ^U	µg/l Cu	7	-	4	14	-	-
Lead (dissolved)	CE055 ^U	µg/l Pb	<9	-	<9	12	-	-
Mercury (dissolved)	CE055	µg/l Hg	<1	-	<1	<1	-	-
Nickel (dissolved)	CE055 ^U	µg/l Ni	<3	-	<3	<3	-	-
Selenium (dissolved)	CE055	µg/l Se	1	-	<1	<1	-	-
Zinc (dissolved)	CE055 ^U	µg/l Zn	<20	-	<20	<20	-	-
pH	CE004	units	11.2	-	7.9	8.5	-	-
Sulphate	CE049 ^U	mg/l SO ₄	117	-	13	<10	-	-
Sulphide	CE079	µg/l S ²⁻	<100	-	<100	<100	-	-
Cyanide (free)	CE077	µg/l CN	<20	-	<20	<20	-	-
Phenols (total)	CE078	µg/l PhOH	-	-	-	-	<10	-
PAHs								
Acenaphthene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Acenaphthylene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Anthracene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(a)anthracene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(a)pyrene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(ghi)perylene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Chrysene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Dibenz(ah)anthracene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Fluoranthene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Fluorene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Indeno(123cd)pyrene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Naphthalene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Phenanthrene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Pyrene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
PAH (total of USEPA 16)	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
Benzo(j)fluoranthene	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1
PAH (total of OIL 8)	CE087	µg/l	-	<0.1	-	<0.1	<0.1	<0.1

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LEACHATES

Lab number			43302-14L	43302-15L	43302-18L	43302-19L	43302-20L	43302-22L
Sample id			TP 3	TP 6	TP 11	TP 12	TP 12	TP 13
Depth (m)			0.00-0.35	0.00-0.65	0.00-0.80	0.00-0.80	0.80-0.95	0.10-0.40
Test	Method	Units						
TPH								
TPH (C5-C7)	CE067	µg/l	-	-	-	-	<1	-
TPH (C7-C8)	CE067	µg/l	-	-	-	-	<1	-
TPH (C8-C10)	CE067	µg/l	-	-	-	-	<1	-
TPH (C10-C12)	CE052	µg/l	-	-	-	-	<1	-
TPH (C12-C16)	CE052	µg/l	-	-	-	-	<1	-
TPH (C16-C21)	CE052	µg/l	-	-	-	-	5	-
TPH (C21-C35)	CE052	µg/l	-	-	-	-	142	-
TPH (C35-C44)	CE052	µg/l	-	-	-	-	<1	-

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE054	Arsenic (total)	Aqua regia digest, ICP-OES	Dry	M	1	mg/kg As
CE054	Cadmium (total)	Aqua regia digest, ICP-OES	Dry	M	0.2	mg/kg Cd
CE054	Chromium (total)	Aqua regia digest, ICP-OES	Dry	M	1	mg/kg Cr
-	Chromium (III)	Calculation: Cr (total) - Cr (VI)	Dry		1	mg/kg CrIII
CE050	Chromium (VI)	Acid extraction, Colorimetry	Dry	U	1	mg/kg CrVI
CE054	Copper (total)	Aqua regia digest, ICP-OES	Dry	M	1	mg/kg Cu
CE054	Lead (total)	Aqua regia digest, ICP-OES	Dry	M	1	mg/kg Pb
CE054	Mercury (total)	Aqua regia digest, ICP-OES	Dry		0.5	mg/kg Hg
CE054	Nickel (total)	Aqua regia digest, ICP-OES	Dry	M	1	mg/kg Ni
CE054	Selenium (total)	Aqua regia digest, ICP-OES	Dry	M	0.3	mg/kg Se
CE054	Zinc (total)	Aqua regia digest, ICP-OES	Dry	M	3	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	Wet	M	-	units
CE049	Sulphate (2:1 water soluble)	Aqueous extraction, IC-COND	Dry	U	10	mg/l SO ₄
CE077	Cyanide (free)	Extraction, Continuous Flow Colorimetry	Wet		2	mg/kg CN
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	Wet		0.5	mg/kg PhOH
CE005	Total Organic Carbon	Based on BS 1377, Colorimetry	Dry	M	0.01	% w/w C
CE005	Organic matter content	Based on BS 1377, Colorimetry	Dry	M	0.01	% w/w
CE087	PAH (speciated)	Solvent extraction, GC-MS	Wet		0.1	mg/kg
CE087	PAH (total)	Solvent extraction, GC-MS	Wet		5	mg/kg
CE057	BTEX	Headspace GC-FID	Wet	U	0.01	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C5-C10)	Headspace GC-FID	Wet		0.01-0.1	mg/kg
CE068	TPH Aliphatic/Aromatic fractions (C10-C44)	Solvent extraction, GC-FID	Wet		1	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-
\$	Asbestos (quantitative)	Phase Contrast Optical Microscopy	Dry	U	0.001	% w/w

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METHOD DETAILS

METHOD	LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE055	Arsenic (dissolved)	ICP-OES		1	µg/l As
CE063	Boron (dissolved)	ICP-OES		30	µg/l B
CE055	Cadmium (dissolved)	ICP-OES	U	1	µg/l Cd
CE055	Chromium (dissolved)	ICP-OES	U	3	µg/l Cr
CE055	Copper (dissolved)	ICP-OES	U	4	µg/l Cu
CE055	Lead (dissolved)	ICP-OES	U	9	µg/l Pb
CE055	Mercury (dissolved)	ICP-OES		1	µg/l Hg
CE055	Nickel (dissolved)	ICP-OES	U	3	µg/l Ni
CE055	Selenium (dissolved)	ICP-OES		1	µg/l Se
CE055	Zinc (dissolved)	ICP-OES	U	20	µg/l Zn
CE004	pH	Based on BS 1377, pH Meter		-	units
CE049	Sulphate	Ion Chromatography	U	10	mg/l SO ₄
CE079	Sulphide	Continuous Flow Colorimetry		100	µg/l S ²⁻
CE077	Cyanide (free)	Distillation, Colorimetry		20	µg/l CN
CE078	Phenols (total)	Continuous Flow Colorimetry		10	µg/l PhOH
CE087	PAH (speciated)	Solvent extraction, GC-MS		0.1	µg/l
CE087	PAH (total)	Solvent extraction, GC-MS		0.1	µg/l
CE067	TPH (C5-C10) speciation	Headspace GC-FID		1	µg/l
CE052	TPH (C10-C40) speciation	Solvent extraction, GC-FID		1	µg/l