

Appendix A Holequest Ltd Geotechnical Sampling and Testing Extract

4:0 LABORATORY TESTING

A programme of laboratory testing, agreed with AECOM, was undertaken at the UKAS Accredited laboratories of PSL Ltd on behalf of Messrs Holequest Limited. The tests where appropriate were undertaken in accordance with British Standard 1377 "Methods of Tests for Soils for Civil Engineering Purposes" or as indicated otherwise. The various tests undertaken are as follows:-

- 1) NATURAL MOISTURE CONTENT
- 2) PARTICLE SIZE DISTRIBUTION BY WET SIEVE
- 3) PARTICLE SIZE DISTRIBUTION BY SEDIMENTATION (PIPETTE)
- 4) LIQUID & PLASTIC LIMITS
- 5) CONSOLIDATED DRAINED SHEARBOX
- 6) CONSOLIDATED UNDRAINED TRIAXIAL WITH MEASUREMENT OF POREWATER PRESSURE (MULTISATGE)
- 7) ONE DIMENSIONAL CONSOLIDATION

A programme of laboratory testing for contaminants, agreed with AECOM, was undertaken at the UKAS / MCERTS accredited laboratory of Scientific Analysis Laboratories Ltd, on behalf of Messrs Holequest Limited. The soil and water samples were tested for one or more of the following:-

- 1) BRE SD1 SUITE
- 2) MARINE SCOTLAND SUITE
- 3) WASTE ACCEPTANCE CRITERIA (UNKNOWN)
- 4) ARSENIC
- 5) BORON (WATER SOLUBLE)
- 6) CADMIUM
- 7) CHROMIUM (TOTAL)
- 8) COPPER
- 9) CYANIDE (TOTAL)
- 10) LEAD
- 11) MERCURY
- 12) NICKEL
- 13) pH
- 14) SELEMIUM
- 15) SULPHATE (ACID SOLUBLE AND 2:1 EXTRACT)
- 16) ZINC
- 17) ORGANIC MATTER CONTENT
- 18) PAH (EPA 16)
- 19) SVOC
- 20) VOC
- 21) TPH (ALIPHATIC / AROMATIC SPLIT)
- 22) ASBESTOS ID

The Geotechnical and Environmental Laboratory Test Results are summarised in Appendix IV.

Prepared By:-

[REDACTED]

for HOLEQUEST LTD

Dated:- November 2017

Approved By:-

[REDACTED]

**for HOLEQUEST LTD
&©ajb**

Dated:- November 2017

APPENDIX IV

Laboratory Testing

ii) Environmental Testing



CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

Concept Life Sciences is a trading name of
Concept Life Sciences Analytical & Development
Services Limited registered in England and
Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 669675-2

Date of Report: 08-Aug-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17155

Customer Site Reference: UIG, Skye

Date Job Received at Concept: 19-Jul-2017

Date Analysis Started: 21-Jul-2017

Date Analysis Completed: 08-Aug-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

[REDACTED]

Concept Reference: 669675					
Project Site: UIG, Skye					
Customer Reference: 17/035					
Sediment		Analysed as Sediment			
Metals Matrix Spike					
Concept Reference					669675 005
Customer Sample Reference					Matrix Spike
Determinand	Method	Test Sample	LOD	Units	
As Recovery	T750	AR	1	%	100
Cd Recovery	T750	AR	1	%	100
Cr Recovery	T750	AR	1	%	100
Cu Recovery	T750	AR	1	%	90
Ni Recovery	T750	AR	1	%	100
Pb Recovery	T750	AR	1	%	100
Zn Recovery	T750	AR	1	%	100



Concept Reference: 669675
Project Site: UIG, Skye
Customer Reference: 17/035

Soil Analysed as Soil
PAH Matrix Spike

Concept Reference					669675 004
Customer Sample Reference					Matrix Spike
Date Sampled					20-JUL-2017
Determinand	Method	Test Sample	LOD	Units	
Naphthalene Recovery	T429	AR	1	%	92
Acenaphthene Recovery	T429	AR	1	%	97
Phenanthrene Recovery	T429	AR	1	%	93
Chrysene Recovery	T429	AR	1	%	95
Benzo(a)Pyrene Recovery	T429	AR	1	%	99



Concept Reference: 669675
Project Site: UIG, Skye
Customer Reference: 17/035

Soil Analysed as Soil
PCB Matrix Spike

Concept Reference	669675 004
Customer Sample Reference	Matrix Spike
Date Sampled	20-JUL-2017

Determinand	Method	Test Sample	LOD	Units	
PCB BZ#28 Recovery	T434	AR	1	%	84
PCB BZ#52 Recovery	T434	AR	1	%	94
PCB BZ#101 Recovery	T434	AR	1	%	86
PCB BZ#118 Recovery	T434	AR	1	%	90
PCB BZ#153 Recovery	T434	AR	1	%	86
PCB BZ#138 Recovery	T434	AR	1	%	92
PCB BZ#180 Recovery	T434	AR	1	%	92



Concept Reference: 669675
Project Site: UIG, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Marine Scotland Suite

					Concept Reference	669675 001	669675 002	669675 003
					Customer Sample Reference	Seabed 0.1m	Seabed 0.5m	Seabed 0.8m
Determinand	Method	Test Sample	LOD	Units				
Arsenic	T740	AR	0.5	mg/kg	7.3	9.0	6.5	
Cadmium	T740	AR	0.1	mg/kg	0.3	0.3	0.3	
Chromium	T740	AR	0.5	mg/kg	380	410	490	
Copper	T740	AR	0.5	mg/kg	41	25	37	
Lead	T740	AR	0.5	mg/kg	6.4	3.5	4.8	
Nickel	T740	AR	0.5	mg/kg	220	190	230	
Zinc	T740	AR	1.0	mg/kg	100	77	100	
Mercury	T355	AR	0.05	mg/kg	(13) 0.35	(13) <0.05	(13) <0.05	
Moisture	T2	AR	0.1	%	20	21	15	
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	(2) <0.50	<0.05	<0.05	
Tributyl tin	T16	AR	0.01	mg/kg	<0.01	<0.01	<0.01	
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	<0.35	<0.35	<0.35	



Concept Reference: 669675
Project Site: UIG, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Poly-Chlorinated Biphenyls (ICES 7)

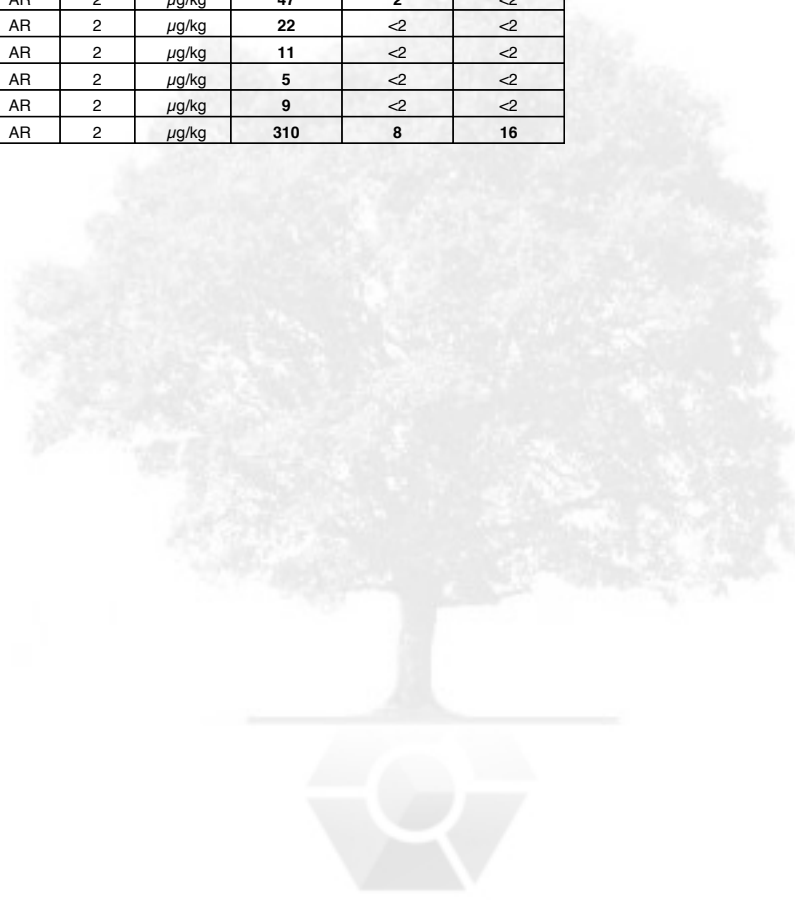
Concept Reference					669675 001	669675 002	669675 003
Customer Sample Reference					Seabed 0.1m	Seabed 0.5m	Seabed 0.8m
Determinand	Method	Test Sample	LOD	Units			
PCB BZ#28	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#52	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#101	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#118	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#153	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#138	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#180	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05



Concept Reference: 669675
Project Site: UIG, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Total and Speciated USEPA16 PAH

					Concept Reference	669675 001	669675 002	669675 003
					Customer Sample Reference	Seabed 0.1m	Seabed 0.5m	Seabed 0.8m
Determinand	Method	Test Sample	LOD	Units				
Naphthalene	T1	AR	2	µg/kg	24	6	11	
Acenaphthylene	T1	AR	2	µg/kg	<2	<2	<2	
Acenaphthene	T1	AR	2	µg/kg	3	<2	3	
Fluorene	T1	AR	2	µg/kg	2	<2	2	
Phenanthrene	T1	AR	2	µg/kg	15	<2	<2	
Anthracene	T1	AR	2	µg/kg	6	<2	<2	
Fluoranthene	T1	AR	2	µg/kg	56	<2	<2	
Pyrene	T1	AR	2	µg/kg	48	<2	<2	
Benzo(a)Anthracene	T1	AR	2	µg/kg	33	<2	<2	
Chrysene	T1	AR	2	µg/kg	33	<2	<2	
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	47	2	<2	
Benzo(a)Pyrene	T1	AR	2	µg/kg	22	<2	<2	
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	11	<2	<2	
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	5	<2	<2	
Benzo(ghi)Perylene	T1	AR	2	µg/kg	9	<2	<2	
PAH(total)	T1	AR	2	µg/kg	310	8	16	



Index to symbols used in 669675-2

Value	Description
AR	As Received
2	LOD Raised Due to Matrix Interference
13	Results have been blank corrected.
N	Analysis is not UKAS accredited

Notes

The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T85	Calc
T740	ICP/MS (HF)
T16	GC/MS
T429	GC/MS (Recovery)
T1	GC/MS (HR)
T355	CVAFS
T750	ICP/MS (Recovery)
T2	Grav
T434	GC/MS (HR) (Recovery)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
PCB BZ#28 Recovery	T434	AR	1	%	N	004
PCB BZ#52 Recovery	T434	AR	1	%	N	004
PCB BZ#101 Recovery	T434	AR	1	%	N	004
PCB BZ#118 Recovery	T434	AR	1	%	N	004
PCB BZ#153 Recovery	T434	AR	1	%	N	004
PCB BZ#138 Recovery	T434	AR	1	%	N	004
PCB BZ#180 Recovery	T434	AR	1	%	N	004
Naphthalene Recovery	T429	AR	1	%	N	004
Acenaphthene Recovery	T429	AR	1	%	N	004
Phenanthrene Recovery	T429	AR	1	%	N	004
Chrysene Recovery	T429	AR	1	%	N	004
Benzo(a)Pyrene Recovery	T429	AR	1	%	N	004
Arsenic	T740	AR	0.5	mg/kg	N	001-003
Cadmium	T740	AR	0.1	mg/kg	N	001-003
Chromium	T740	AR	0.5	mg/kg	N	001-003
Copper	T740	AR	0.5	mg/kg	N	001-003
Lead	T740	AR	0.5	mg/kg	N	001-003
Nickel	T740	AR	0.5	mg/kg	N	001-003
Zinc	T740	AR	1.0	mg/kg	N	001-003
Mercury	T355	AR	0.05	mg/kg	N	001-003
Moisture	T2	AR	0.1	%	N	001-003
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	N	001-003
Tributyl tin	T16	AR	0.01	mg/kg	N	001-003
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	N	001-003
PCB BZ#28	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#52	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#101	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#118	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#153	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#138	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#180	T1	AR	0.05	µg/kg	N	001-003
Naphthalene	T1	AR	2	µg/kg	N	001-003
Acenaphthylene	T1	AR	2	µg/kg	N	001-003
Acenaphthene	T1	AR	2	µg/kg	N	001-003
Fluorene	T1	AR	2	µg/kg	N	001-003
Phenanthrene	T1	AR	2	µg/kg	N	001-003
Anthracene	T1	AR	2	µg/kg	N	001-003
Fluoranthene	T1	AR	2	µg/kg	N	001-003
Pyrene	T1	AR	2	µg/kg	N	001-003

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Benzo(a)Anthracene	T1	AR	2	µg/kg	N	001-003
Chrysene	T1	AR	2	µg/kg	N	001-003
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	N	001-003
Benzo(a)Pyrene	T1	AR	2	µg/kg	N	001-003
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	N	001-003
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	N	001-003
Benzo(ghi)Perylene	T1	AR	2	µg/kg	N	001-003
PAH(total)	T1	AR	2	µg/kg	N	001-003
As Recovery	T750	AR	1	%	N	005
Cd Recovery	T750	AR	1	%	N	005
Cr Recovery	T750	AR	1	%	N	005
Cu Recovery	T750	AR	1	%	N	005
Ni Recovery	T750	AR	1	%	N	005
Pb Recovery	T750	AR	1	%	N	005
Zn Recovery	T750	AR	1	%	N	005





CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

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Concept Life Sciences Analytical & Development
Services Limited registered in England and
Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 675775-1

Date of Report: 23-Aug-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference:

Date Job Received at Concept: 25-Jul-2017

Date Analysis Started: 16-Aug-2017

Date Analysis Completed: 22-Aug-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

[REDACTED]

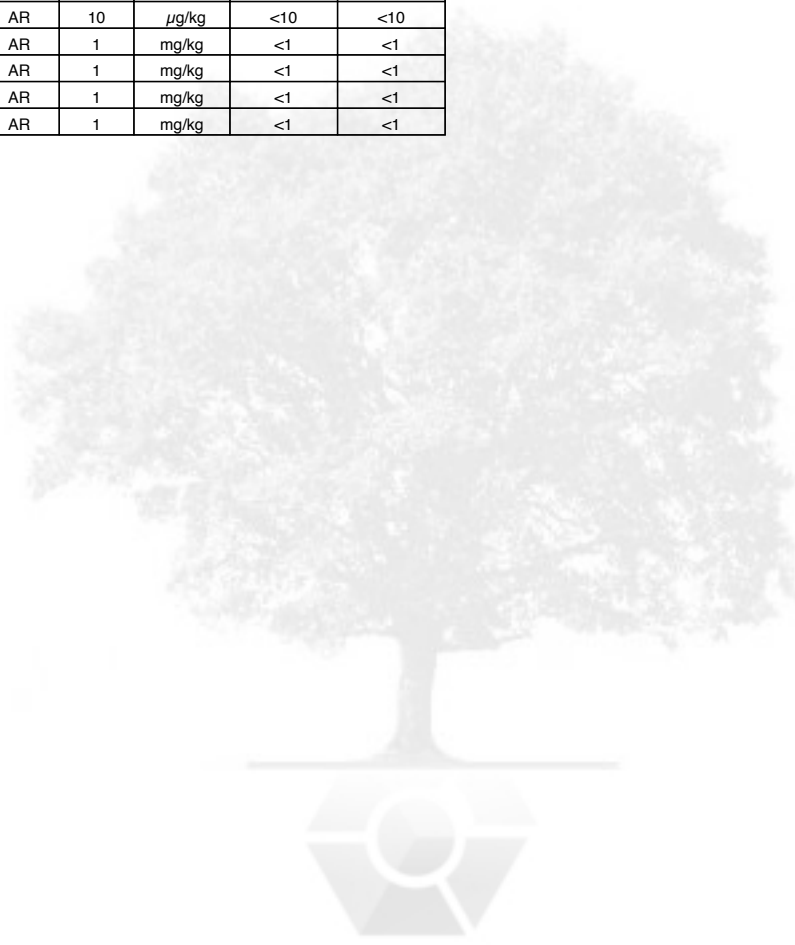
Concept Reference: 675775

Customer Reference:

Soil
CWG

Analysed as Soil

Concept Reference		675775 003	675775 008			
Customer Sample Reference		TP02 0.0M	TP04 0.0M			
Date Sampled		20-JUL-2017	21-JUL-2017			
Determinand	Method	Test Sample	LOD	Units		
TPH (C5-C6 aliphatic)	T54	AR	10	µg/kg	<10	<10
TPH (C6-C8 aliphatic)	T54	AR	10	µg/kg	<10	<10
TPH (C8-C10 aliphatic)	T54	AR	10	µg/kg	<10	<10
TPH (C10-C12 aliphatic)	T8	AR	1	mg/kg	<1	<1
TPH (C12-C16 aliphatic)	T8	AR	1	mg/kg	<1	<1
TPH (C16-C21 aliphatic)	T8	AR	1	mg/kg	<1	<1
TPH (C21-C35 aliphatic)	T8	AR	1	mg/kg	⁽¹³⁾ <1	<1
TPH (C6-C7 aromatic)	T54	AR	10	µg/kg	<10	<10
TPH (C7-C8 aromatic)	T54	AR	10	µg/kg	<10	<10
TPH (C8-C10 aromatic)	T54	AR	10	µg/kg	<10	<10
TPH (C10-C12 aromatic)	T8	AR	1	mg/kg	<1	<1
TPH (C12-C16 aromatic)	T8	AR	1	mg/kg	<1	<1
TPH (C16-C21 aromatic)	T8	AR	1	mg/kg	<1	<1
TPH (C21-C35 aromatic)	T8	AR	1	mg/kg	<1	<1



Concept Reference: 675775						
Customer Reference:						
Soil		Analysed as Soil				
Suite Requested						
Concept Reference			675775 003	675775 008		
Customer Sample Reference			TP02 0.0M	TP04 0.0M		
Date Sampled			20-JUL-2017	21-JUL-2017		
Determinand	Method	Test Sample	LOD	Units		
Arsenic	T82	A40	2	mg/kg	7	8
Cadmium	T82	A40	1	mg/kg	<1	<1
Chromium	T82	A40	1	mg/kg	52	71
Copper	T82	A40	1	mg/kg	55	43
Lead	T82	A40	3	mg/kg	10	19
Mercury	T82	A40	1	mg/kg	<1	<1
Nickel	T82	A40	1	mg/kg	140	170
Selenium	T82	A40	3	mg/kg	<3	<3
Zinc	T82	A40	1	mg/kg	95	130
pH	T7	A40			8.2	7.7
Asbestos ID	T27	AR			N.D.	N.D.
Organic Matter	T2	A40	0.1	%	1.9	3.8



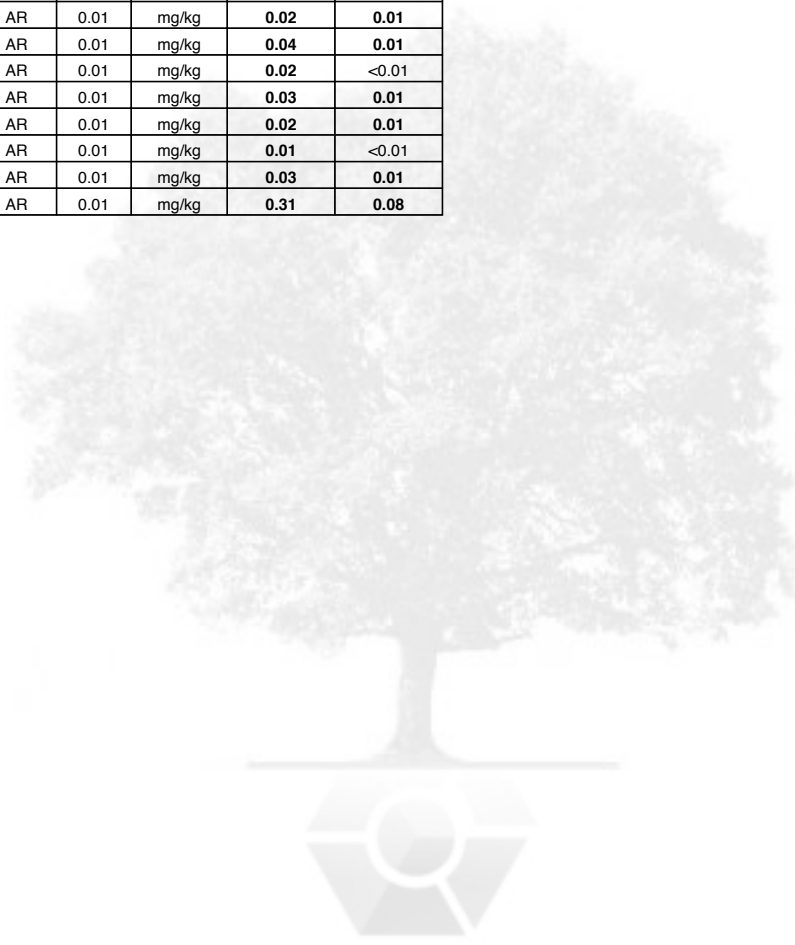
Concept Reference: 675775

Customer Reference:

Soil Analysed as Soil

Total and Speciated USEPA16 PAH (EK)

Concept Reference		675775 003	675775 008			
Customer Sample Reference		TP02 0.0M	TP04 0.0M			
Date Sampled		20-JUL-2017	21-JUL-2017			
Determinand	Method	Test Sample	LOD	Units		
Naphthalene	T149	AR	0.01	mg/kg	0.01	0.01
Acenaphthylene	T149	AR	0.01	mg/kg	0.01	<0.01
Acenaphthene	T149	AR	0.01	mg/kg	<0.01	<0.01
Fluorene	T149	AR	0.01	mg/kg	<0.01	<0.01
Phenanthrene	T149	AR	0.01	mg/kg	0.01	<0.01
Anthracene	T149	AR	0.01	mg/kg	0.01	<0.01
Fluoranthene	T149	AR	0.01	mg/kg	0.04	0.01
Pyrene	T149	AR	0.01	mg/kg	0.04	0.01
Benzo(a)Anthracene	T149	AR	0.01	mg/kg	⁽¹³⁾ 0.02	⁽¹³⁾ <0.01
Chrysene	T149	AR	0.01	mg/kg	0.02	0.01
Benzo(b)fluoranthene	T149	AR	0.01	mg/kg	0.04	0.01
Benzo(k)fluoranthene	T149	AR	0.01	mg/kg	0.02	<0.01
Benzo(a)Pyrene	T149	AR	0.01	mg/kg	0.03	0.01
Indeno(123-cd)Pyrene	T149	AR	0.01	mg/kg	0.02	0.01
Dibenzo(ah)Anthracene	T149	AR	0.01	mg/kg	0.01	<0.01
Benzo(ghi)Perylene	T149	AR	0.01	mg/kg	0.03	0.01
PAH(total)	T149	AR	0.01	mg/kg	0.31	0.08



Concept Reference: 675775

Customer Reference:

Soil Analysed as Soil
Semi-Volatile Organic Compounds (USEPA 625)(EK)

Concept Reference		675775 003	675775 008	675775 011			
Customer Sample Reference		TP02 0.0M	TP04 0.0M	SVOC BLANK			
Date Sampled		20-JUL-2017	21-JUL-2017	15-AUG-2017			
Determinand	Method	Test Sample	LOD	Units			
Phenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Bis (2-chloroethyl) ether	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-Chlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
1,3-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
1,4-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
1,2-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Bis (2-chloroisopropyl) ether	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-methyl phenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
3/4-Methylphenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Hexachloroethane	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Nitrobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Isophorone	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,4-Dimethylphenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Bis (2-chloroethoxy) methane	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,4-Dichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
1,2,4-Trichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Naphthalene	T16	AR	0.1	mg/kg	0.2	<0.1	<0.1
4-Chloroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Hexachlorobutadiene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
4-Chloro-3-methylphenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-Methylnaphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Hexachlorocyclopentadiene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-Chloronaphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-Nitroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Dimethyl phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,6-Dinitrotoluene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	T16	AR	0.1	mg/kg	0.2	<0.1	<0.1
3-Nitroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Dibenzofuran	T16	AR	0.1	mg/kg	0.1	<0.1	<0.1
2,4-Dinitrotoluene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2,4-Dinitrophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
2-Nitrophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Diethyl phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Fluorene	T16	AR	0.1	mg/kg	0.2	<0.1	<0.1
4-Chlorophenyl phenylether	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
4-Nitroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Azobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
4-Bromophenyl phenylether	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Hexachlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Pentachlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	T16	AR	0.1	mg/kg	0.9	0.1	<0.1
Anthracene	T16	AR	0.1	mg/kg	0.3	<0.1	<0.1
Carbazole	T16	AR	0.1	mg/kg	0.3	<0.1	<0.1
Di-n-butylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	T16	AR	0.1	mg/kg	1.1	0.2	<0.1
Pyrene	T16	AR	0.1	mg/kg	0.9	0.2	<0.1
Butyl benzylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	0.5	<0.1	<0.1
4-Nitrophenol	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Chrysene	T16	AR	0.1	mg/kg	0.5	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Di-n-octylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	0.8	0.1	<0.1
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	0.5	<0.1	<0.1
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	0.2	<0.1	<0.1
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	0.3	<0.1	<0.1

Concept Reference: 675775
 Customer Reference:

Soil Analysed as Soil
 Volatile Organic Compounds (USEPA 624)

Concept Reference		675775 003	675775 008			
Customer Sample Reference		TP02 0.0M	TP04 0.0M			
Date Sampled		20-JUL-2017	21-JUL-2017			
Determinand	Method	Test Sample	LOD	Units		
Dichlorodifluoromethane	T54	AR	5	µg/kg	<5	<5
Chloromethane	T54	AR	5	µg/kg	<5	<5
Vinyl chloride	T54	AR	5	µg/kg	<5	<5
Bromomethane	T54	AR	5	µg/kg	<5	<5
Chloroethane	T54	AR	5	µg/kg	<5	<5
Trichlorofluoromethane	T54	AR	5	µg/kg	<5	<5
1,1-Dichloroethylene	T54	AR	5	µg/kg	<5	<5
Dichloromethane	T54	AR	50	µg/kg	<50	<50
Trans-1,2-Dichloroethene	T54	AR	5	µg/kg	<5	<5
1,1-Dichloroethane	T54	AR	5	µg/kg	<5	<5
Cis-1,2-Dichloroethylene	T54	AR	5	µg/kg	<5	<5
2,2-Dichloropropane	T54	AR	5	µg/kg	<5	<5
Chloroform	T54	AR	5	µg/kg	<5	<5
Bromochloromethane	T54	AR	5	µg/kg	<5	<5
1,1,1-Trichloroethane	T54	AR	5	µg/kg	<5	<5
1,1-Dichloropropene	T54	AR	5	µg/kg	<5	<5
Carbon tetrachloride	T54	AR	5	µg/kg	<5	<5
1,2-Dichloroethane	T54	AR	5	µg/kg	<5	<5
Benzene	T54	AR	1	µg/kg	(13) <1	(13) <1
1,2-Dichloropropane	T54	AR	5	µg/kg	<5	<5
1,1,2-Trichloroethylene	T54	AR	5	µg/kg	<5	<5
Bromodichloromethane	T54	AR	5	µg/kg	<5	<5
Dibromomethane	T54	AR	5	µg/kg	<5	<5
Cis-1,3-Dichloropropene	T54	AR	5	µg/kg	<5	<5
Toluene	T54	AR	1	µg/kg	<1	<1
Trans-1,3-Dichloropropene	T54	AR	5	µg/kg	<5	<5
1,1,2-Trichloroethane	T54	AR	5	µg/kg	<5	<5
1,3-Dichloropropane	T54	AR	5	µg/kg	<5	<5
Tetrachloroethene	T54	AR	5	µg/kg	<5	<5
Chlorodibromomethane	T54	AR	5	µg/kg	<5	<5
1,2-dibromoethane	T54	AR	5	µg/kg	<5	<5
Chlorobenzene	T54	AR	5	µg/kg	<5	<5
1,1,1,2-Tetrachloroethane	T54	AR	5	µg/kg	<5	<5
EthylBenzene	T54	AR	1	µg/kg	<1	<1
M/P Xylene	T54	AR	1	µg/kg	<1	<1
O Xylene	T54	AR	1	µg/kg	<1	<1
Styrene	T54	AR	5	µg/kg	<5	<5
Bromoform	T54	AR	5	µg/kg	<5	<5
Isopropyl benzene	T54	AR	5	µg/kg	<5	<5
1,1,1,2-Tetrachloroethane	T54	AR	5	µg/kg	<5	<5
1,2,3-Trichloropropane	T54	AR	5	µg/kg	<5	<5
n-Propylbenzene	T54	AR	5	µg/kg	<5	<5
Bromobenzene	T54	AR	5	µg/kg	<5	<5
1,3,5-Trimethylbenzene	T54	AR	5	µg/kg	<5	<5
T-Butylbenzene	T54	AR	5	µg/kg	<5	<5
1,2,4-Trimethylbenzene	T54	AR	5	µg/kg	<5	<5
S-Butylbenzene	T54	AR	5	µg/kg	<5	<5
p-Isopropyltoluene	T54	AR	5	µg/kg	<5	<5
2-Chlorotoluene	T54	AR	5	µg/kg	<5	<5
4-Chlorotoluene	T54	AR	5	µg/kg	<5	<5
1,3-Dichlorobenzene	T54	AR	5	µg/kg	<5	<5
1,4-Dichlorobenzene	T54	AR	5	µg/kg	<5	<5
1,2-Dichlorobenzene	T54	AR	5	µg/kg	<5	<5

Index to symbols used in 675775-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
N.D.	Not Detected
13	Results have been blank corrected.
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

SVOC, PAH and VOC - These samples have been analysed exceeding recommended holding times. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T7	Probe
T8	GC/FID
T149	GC/MS (SIR)
T27	PLM
T54	GC/MS (Headspace)
T2	Grav
T82	ICP/OES (Sim)
T16	GC/MS

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Phenol	T16	AR	0.1	mg/kg	U	003,008,011
Bis (2-chloroethyl) ether	T16	AR	0.1	mg/kg	U	003,008,011
2-Chlorophenol	T16	AR	0.1	mg/kg	U	003,008,011
1,3-Dichlorobenzene	T16	AR	0.1	mg/kg	U	003,008,011
1,4-Dichlorobenzene	T16	AR	0.1	mg/kg	U	003,008,011
1,2-Dichlorobenzene	T16	AR	0.1	mg/kg	U	003,008,011
Bis (2-chloroisopropyl) ether	T16	AR	0.1	mg/kg	U	003,008,011
2-methyl phenol	T16	AR	0.1	mg/kg	U	003,008,011
3/4-Methylphenol	T16	AR	0.1	mg/kg	U	003,008,011
Hexachloroethane	T16	AR	0.1	mg/kg	U	003,008,011
Nitrobenzene	T16	AR	0.1	mg/kg	U	003,008,011
Isophorone	T16	AR	0.1	mg/kg	U	003,008,011
2,4-Dimethylphenol	T16	AR	0.1	mg/kg	U	003,008,011
Bis (2-chloroethoxy) methane	T16	AR	0.1	mg/kg	U	003,008,011
2,4-Dichlorophenol	T16	AR	0.1	mg/kg	U	003,008,011
1,2,4-Trichlorobenzene	T16	AR	0.1	mg/kg	U	003,008,011
Naphthalene	T16	AR	0.1	mg/kg	U	003,008,011
4-Chloroaniline	T16	AR	0.1	mg/kg	U	003,008,011
Hexachlorobutadiene	T16	AR	0.1	mg/kg	U	003,008,011
4-Chloro-3-methylphenol	T16	AR	0.1	mg/kg	U	003,008,011
2-Methylnaphthalene	T16	AR	0.1	mg/kg	U	003,008,011
Hexachlorocyclopentadiene	T16	AR	0.1	mg/kg	U	003,008,011
2,4,6-Trichlorophenol	T16	AR	0.1	mg/kg	U	003,008,011
2,4,5-Trichlorophenol	T16	AR	0.1	mg/kg	U	003,008,011
2-Chloronaphthalene	T16	AR	0.1	mg/kg	U	003,008,011
2-Nitroaniline	T16	AR	0.1	mg/kg	U	003,008,011
Dimethyl phthalate	T16	AR	0.1	mg/kg	U	003,008,011
2,6-Dinitrotoluene	T16	AR	0.1	mg/kg	U	003,008,011
Acenaphthylene	T16	AR	0.1	mg/kg	U	003,008,011
Acenaphthene	T16	AR	0.1	mg/kg	U	003,008,011
3-Nitroaniline	T16	AR	0.1	mg/kg	U	003,008,011
Dibenzofuran	T16	AR	0.1	mg/kg	U	003,008,011
2,4-Dinitrophenol	T16	AR	0.1	mg/kg	N	003,008,011
2,4-Dinitrotoluene	T16	AR	0.1	mg/kg	U	003,008,011
2-Nitrophenol	T16	AR	0.1	mg/kg	U	003,008,011
Diethyl phthalate	T16	AR	0.1	mg/kg	U	003,008,011
Fluorene	T16	AR	0.1	mg/kg	U	003,008,011

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
4-Chlorophenyl phenylether	T16	AR	0.1	mg/kg	U	003,008,011
4-Nitroaniline	T16	AR	0.1	mg/kg	U	003,008,011
Azobenzene	T16	AR	0.1	mg/kg	U	003,008,011
4-Bromophenyl phenylether	T16	AR	0.1	mg/kg	U	003,008,011
Hexachlorobenzene	T16	AR	0.1	mg/kg	U	003,008,011
Pentachlorophenol	T16	AR	0.1	mg/kg	U	003,008,011
Phenanthrene	T16	AR	0.1	mg/kg	U	003,008,011
Anthracene	T16	AR	0.1	mg/kg	U	003,008,011
Carbazole	T16	AR	0.1	mg/kg	U	003,008,011
Di-n-butylphthalate	T16	AR	0.1	mg/kg	U	003,008,011
Fluoranthene	T16	AR	0.1	mg/kg	U	003,008,011
Pyrene	T16	AR	0.1	mg/kg	U	003,008,011
Butyl benzyolphthalate	T16	AR	0.1	mg/kg	U	003,008,011
Benzo(a)Anthracene	T16	AR	0.1	mg/kg	U	003,008,011
4-Nitrophenol	T16	AR	0.1	mg/kg	N	003,008,011
Chrysene	T16	AR	0.1	mg/kg	U	003,008,011
Bis (2-ethylhexyl)phthalate	T16	AR	0.1	mg/kg	U	003,008,011
Di-n-octylphthalate	T16	AR	0.1	mg/kg	U	003,008,011
Benzo(b/k)Fluoranthene	T16	AR	0.1	mg/kg	U	003,008,011
Benzo(a)Pyrene	T16	AR	0.1	mg/kg	U	003,008,011
Indeno(123-cd)Pyrene	T16	AR	0.1	mg/kg	U	003,008,011
Dibenzo(ah)Anthracene	T16	AR	0.1	mg/kg	U	003,008,011
Benzo(ghi)Perylene	T16	AR	0.1	mg/kg	U	003,008,011
TPH (C5-C6 aliphatic)	T54	AR	10	µg/kg	N	003,008
TPH (C6-C8 aliphatic)	T54	AR	10	µg/kg	N	003,008
TPH (C8-C10 aliphatic)	T54	AR	10	µg/kg	N	003,008
TPH (C10-C12 aliphatic)	T8	AR	1	mg/kg	N	003,008
TPH (C12-C16 aliphatic)	T8	AR	1	mg/kg	N	003,008
TPH (C16-C21 aliphatic)	T8	AR	1	mg/kg	N	003,008
TPH (C21-C35 aliphatic)	T8	AR	1	mg/kg	N	003,008
TPH (C6-C7 aromatic)	T54	AR	10	µg/kg	N	003,008
TPH (C7-C8 aromatic)	T54	AR	10	µg/kg	N	003,008
TPH (C8-C10 aromatic)	T54	AR	10	µg/kg	N	003,008
TPH (C10-C12 aromatic)	T8	AR	1	mg/kg	N	003,008
TPH (C12-C16 aromatic)	T8	AR	1	mg/kg	N	003,008
TPH (C16-C21 aromatic)	T8	AR	1	mg/kg	N	003,008
TPH (C21-C35 aromatic)	T8	AR	1	mg/kg	N	003,008
Naphthalene	T149	AR	0.01	mg/kg	U	003,008
Acenaphthylene	T149	AR	0.01	mg/kg	U	003,008
Acenaphthene	T149	AR	0.01	mg/kg	U	003,008
Fluorene	T149	AR	0.01	mg/kg	U	003,008
Phenanthrene	T149	AR	0.01	mg/kg	U	003,008
Anthracene	T149	AR	0.01	mg/kg	U	003,008
Fluoranthene	T149	AR	0.01	mg/kg	U	003,008
Pyrene	T149	AR	0.01	mg/kg	U	003,008
Benzo(a)Anthracene	T149	AR	0.01	mg/kg	U	003,008
Chrysene	T149	AR	0.01	mg/kg	U	003,008
Benzo(b)fluoranthene	T149	AR	0.01	mg/kg	U	003,008
Benzo(k)fluoranthene	T149	AR	0.01	mg/kg	U	003,008
Benzo(a)Pyrene	T149	AR	0.01	mg/kg	U	003,008
Indeno(123-cd)Pyrene	T149	AR	0.01	mg/kg	U	003,008
Dibenzo(ah)Anthracene	T149	AR	0.01	mg/kg	U	003,008
Benzo(ghi)Perylene	T149	AR	0.01	mg/kg	U	003,008
PAH(total)	T149	AR	0.01	mg/kg	U	003,008
Arsenic	T82	A40	2	mg/kg	U	003,008
Cadmium	T82	A40	1	mg/kg	U	003,008
Chromium	T82	A40	1	mg/kg	U	003,008
Copper	T82	A40	1	mg/kg	U	003,008
Lead	T82	A40	3	mg/kg	U	003,008
Mercury	T82	A40	1	mg/kg	U	003,008
Nickel	T82	A40	1	mg/kg	U	003,008
Selenium	T82	A40	3	mg/kg	U	003,008
Zinc	T82	A40	1	mg/kg	U	003,008
pH	T7	A40			U	003,008
Asbestos ID	T27	AR			SU	003,008
Organic Matter	T2	A40	0.1	%	N	003,008
Dichlorodifluoromethane	T54	AR	5	µg/kg	U	003,008
Chloromethane	T54	AR	5	µg/kg	U	003,008
Vinyl chloride	T54	AR	5	µg/kg	U	003,008
Bromomethane	T54	AR	5	µg/kg	U	003,008

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Chloroethane	T54	AR	5	µg/kg	U	003,008
Trichlorofluoromethane	T54	AR	5	µg/kg	U	003,008
1,1-Dichloroethylene	T54	AR	5	µg/kg	U	003,008
Dichloromethane	T54	AR	50	µg/kg	N	003,008
Trans-1,2-Dichloroethene	T54	AR	5	µg/kg	U	003,008
1,1-Dichloroethane	T54	AR	5	µg/kg	U	003,008
Cis-1,2-Dichloroethylene	T54	AR	5	µg/kg	U	003,008
2,2-Dichloropropane	T54	AR	5	µg/kg	U	003,008
Chloroform	T54	AR	5	µg/kg	U	003,008
Bromochloromethane	T54	AR	5	µg/kg	U	003,008
1,1,1-Trichloroethane	T54	AR	5	µg/kg	U	003,008
1,1-Dichloropropene	T54	AR	5	µg/kg	U	003,008
Carbon tetrachloride	T54	AR	5	µg/kg	U	003,008
1,2-Dichloroethane	T54	AR	5	µg/kg	U	003,008
Benzene	T54	AR	1	µg/kg	U	003,008
1,2-Dichloropropane	T54	AR	5	µg/kg	U	003,008
1,1,2-Trichloroethylene	T54	AR	5	µg/kg	U	003,008
Bromodichloromethane	T54	AR	5	µg/kg	U	003,008
Dibromomethane	T54	AR	5	µg/kg	U	003,008
Cis-1,3-Dichloropropene	T54	AR	5	µg/kg	U	003,008
Toluene	T54	AR	1	µg/kg	U	003,008
Trans-1,3-Dichloropropene	T54	AR	5	µg/kg	U	003,008
1,1,2-Trichloroethane	T54	AR	5	µg/kg	U	003,008
1,3-Dichloropropane	T54	AR	5	µg/kg	U	003,008
Tetrachloroethene	T54	AR	5	µg/kg	U	003,008
Chlorodibromomethane	T54	AR	5	µg/kg	U	003,008
1,2-dibromoethane	T54	AR	5	µg/kg	U	003,008
Chlorobenzene	T54	AR	5	µg/kg	U	003,008
1,1,1,2-Tetrachloroethane	T54	AR	5	µg/kg	U	003,008
Ethylbenzene	T54	AR	1	µg/kg	U	003,008
M/P Xylene	T54	AR	1	µg/kg	U	003,008
O Xylene	T54	AR	1	µg/kg	U	003,008
Styrene	T54	AR	5	µg/kg	U	003,008
Bromoform	T54	AR	5	µg/kg	U	003,008
Isopropyl benzene	T54	AR	5	µg/kg	U	003,008
1,1,2,2-Tetrachloroethane	T54	AR	5	µg/kg	U	003,008
1,2,3-Trichloropropane	T54	AR	5	µg/kg	U	003,008
n-Propylbenzene	T54	AR	5	µg/kg	U	003,008
Bromobenzene	T54	AR	5	µg/kg	U	003,008
1,3,5-Trimethylbenzene	T54	AR	5	µg/kg	U	003,008
T-Butylbenzene	T54	AR	5	µg/kg	U	003,008
1,2,4-Trimethylbenzene	T54	AR	5	µg/kg	U	003,008
S-Butylbenzene	T54	AR	5	µg/kg	U	003,008
p-Isopropyltoluene	T54	AR	5	µg/kg	U	003,008
2-Chlorotoluene	T54	AR	5	µg/kg	U	003,008
4-Chlorotoluene	T54	AR	5	µg/kg	U	003,008
1,3-Dichlorobenzene	T54	AR	5	µg/kg	U	003,008
1,4-Dichlorobenzene	T54	AR	5	µg/kg	U	003,008
1,2-Dichlorobenzene	T54	AR	5	µg/kg	U	003,008



CONCEPT LIFE SCIENCES
DELIVERING SCIENCE

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Concept Life Sciences

Certificate of Analysis

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Report Number: 675785-1

Date of Report: 23-Aug-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference:

Date Job Received at Concept: 25-Jul-2017

Date Analysis Started: 16-Aug-2017

Date Analysis Completed: 22-Aug-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

[REDACTED]

Waste Acceptance Criteria

Customer Sample Reference : TP01 0.0M

SAL Sample Reference : 675785 001

Test Portion Mass (g) : 175

Date Sampled : Deviating

Soil Summary					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
PAH (Sum)	Calc	1.6	mg/kg	N	<1.6	100.0		
TPH C10-C40 (sum)	Calc	1	mg/kg	N	(100) <10	500.0		
BTEX (Sum)	Calc	0.0040	mg/kg	U	(13) <0.0040	6.0		
PCB EC7 (Sum)	Calc	0.00035	mg/kg	U	<0.030	1.0		
Total Organic Carbon	OX/IR	0.1	%	N	1.7	3.0	5.0	6.0
pH	Probe			U	8.2		>6.0	
Loss on Ignition	Grav	0.1	%	N	6.2			10.0

10:1 Leachate					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
Antimony (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.024	0.06	0.7	5.0
Arsenic (Dissolved)	Calc / ICP/MS (Filtered)	0.0021	mg/kg	N	0.21	0.5	2.0	25.0
Barium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.54	20.0	100.0	300.0
Cadmium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.04	1.0	5.0
Chromium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.5	10.0	70.0
Copper (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	2.0	50.0	100.0
Lead (Dissolved)	Calc / ICP/MS (Filtered)	0.0031	mg/kg	N	<0.0031	0.5	10.0	50.0
Mercury (Dissolved)	Calc / ICP/MS (Filtered)	0.0021	mg/kg	N	<0.0021	0.01	0.2	2.0
Molybdenum (Dissolved)	Calc / ICP/MS (Filtered)	0.052	mg/kg	N	0.48	0.5	10.0	30.0
Nickel (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.045	0.4	10.0	40.0
Selenium (Dissolved)	Calc / ICP/MS (Filtered)	0.0052	mg/kg	N	0.0056	0.1	0.5	7.0
Zinc (Dissolved)	Calc / ICP/MS (Filtered)	0.021	mg/kg	N	0.14	4.0	50.0	200.0
Chloride	Calc / Discrete Analyser	10	mg/kg	N	23000	800.0	15000.0	25000.0
Fluoride	Calc / Discrete Analyser	0.52	mg/kg	N	9.1	10.0	150.0	500.0
Sulphate	Calc / Discrete Analyser	5.2	mg/kg	N	1400	1000.0	20000.0	50000.0
Dissolved Organic Carbon	Calc / OX/IR	10	mg/kg	N	290	500.0	800.0	1000.0
Phenols(Mono)	Calc / Colorimetry	1.0	mg/kg	N	<1.0	1.0		
Total Dissolved Solids	Calc	100	mg/kg	N	46000	4000.0	60000.0	100000.0

From: Criteria set by European Council Decision 2003/33/EC(2) pursuant to Directive 1999/31/EC(3) and implemented in Scotland by The Landfill (Scotland) Regulations 2003
 The 2:1 moisture extract was not produced because the moisture content of the sample was greater than 200%. Therefore, the exact application of the two-step leaching test is precluded on technical grounds (ref: Section 5.2.4 BS EN 12457-3:2002). Results are derived from a single step leaching at L/S 10/1 as prescribed by the EA guidance. (Ref Section C4.1.1 Guidance on Sampling and Testing of Wastes to meet Landfill Waste Acceptance Procedures Version 1 April 2005, Environment Agency)

Notes:- Cumulative release at L/S=10 (mg/kg of dry matter) in accordance with BS EN 12457. Soil leaching procedure is not covered by our UKAS accreditation

As detailed in- Waste Classification. Guidance on the classification and assessment of waste. Technical Guidance WM3:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427077/LIT_10121.pdf

Landfill WAC analysis (specifically leaching test results) should not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Waste Acceptance Criteria

Customer Sample Reference : TP03 1.0M

SAL Sample Reference : 675785 002

Test Portion Mass (g) : 175

Date Sampled : Deviating

Soil Summary					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
PAH (Sum)	Calc	1.6	mg/kg	N	<1.6	100.0		
TPH C10-C40 (sum)	Calc	1	mg/kg	N	<1	500.0		
BTEX (Sum)	Calc	0.0040	mg/kg	U	(13) 0.020	6.0		
PCB EC7 (Sum)	Calc	0.00035	mg/kg	U	<0.030	1.0		
Total Organic Carbon	OX/IR	0.1	%	N	1.5	3.0	5.0	6.0
pH	Probe			U	8.8		>6.0	
Loss on Ignition	Grav	0.1	%	N	3.0			10.0

10:1 Leachate					Result	Inert Waste Landfill	Stable non reactive	Hazardous Waste Landfill
Determinand	Technique	LOD	Units	Symbol				
Antimony (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.06	0.7	5.0
Arsenic (Dissolved)	Calc / ICP/MS (Filtered)	0.0020	mg/kg	N	0.043	0.5	2.0	25.0
Barium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	0.11	20.0	100.0	300.0
Cadmium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.04	1.0	5.0
Chromium (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.5	10.0	70.0
Copper (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	2.0	50.0	100.0
Lead (Dissolved)	Calc / ICP/MS (Filtered)	0.0030	mg/kg	N	<0.0030	0.5	10.0	50.0
Mercury (Dissolved)	Calc / ICP/MS (Filtered)	0.0020	mg/kg	N	<0.0020	0.01	0.2	2.0
Molybdenum (Dissolved)	Calc / ICP/MS (Filtered)	0.050	mg/kg	N	<0.050	0.5	10.0	30.0
Nickel (Dissolved)	Calc / ICP/MS (Filtered)	0.010	mg/kg	N	<0.010	0.4	10.0	40.0
Selenium (Dissolved)	Calc / ICP/MS (Filtered)	0.0050	mg/kg	N	0.020	0.1	0.5	7.0
Zinc (Dissolved)	Calc / ICP/MS (Filtered)	0.020	mg/kg	N	<0.020	4.0	50.0	200.0
Chloride	Calc / Discrete Analyser	10	mg/kg	N	25	800.0	15000.0	25000.0
Fluoride	Calc / Discrete Analyser	0.50	mg/kg	N	0.50	10.0	150.0	500.0
Sulphate	Calc / Discrete Analyser	5.0	mg/kg	N	180	1000.0	20000.0	50000.0
Dissolved Organic Carbon	Calc / OX/IR	10	mg/kg	N	16	500.0	800.0	1000.0
Phenols(Mono)	Calc / Colorimetry	1.0	mg/kg	N	<1.0	1.0		
Total Dissolved Solids	Calc	100	mg/kg	N	880	4000.0	60000.0	100000.0

From: Criteria set by European Council Decision 2003/33/EC(2) pursuant to Directive 1999/31/EC(3) and implemented in Scotland by The Landfill (Scotland) Regulations 2003
Note:- Sample failed to produce sufficient eluate within the specified time after vacuum filtration for 1 hour and centrifugation for 30 minutes. Therefore, the exact application of the two-step leaching test is precluded on technical grounds. (ref: Section 5.2.4 BS EN 12457-3:2002) Results are derived from a single step leaching at L/S 10/1 as prescribed by the EA guidance. (Ref Section C4.1.1 Guidance on Sampling and Testing of Wastes to meet Landfill Waste Acceptance Procedures Version 1 April 2005, Environment Agency)

Notes:- Cumulative release at L/S=10 (mg/kg of dry matter) in accordance with BS EN 12457. Soil leaching procedure is not covered by our UKAS accreditation

As detailed in- Waste Classification. Guidance on the classification and assessment of waste. Technical Guidance WM3:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/427077/LIT_10121.pdf

Landfill WAC analysis (specifically leaching test results) should not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Index to symbols used in 675785-1

Value	Description
AR	As Received
2:1	Leachate to BS EN 12457-3 (2:1)
8:1	Leachate to BS EN 12457-3 (8:1)
A40	Assisted dried < 40C
100	LOD determined by sample aliquot used for analysis
13	Results have been blank corrected.
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

GC/MS Headspace - LOD raised as samples diluted due to poor internal standard recovery.
PAH soil - These samples have been analysed exceeding recommended holding times. It is possible therefore that the results provided may be compromised.
The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.





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Services Limited registered in England and
Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 676021-1

Date of Report: 24-Aug-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: Mr Craig Rodger

Customer Job Reference: 17/035

Customer Site Reference: UIG Harbour Redevelopment

Date Job Received at Concept: 15-Aug-2017

Date Analysis Started: 16-Aug-2017

Date Analysis Completed: 22-Aug-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :

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████████████████████
████████████████████

Issued by :

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Concept Reference: 676021						
Project Site: UIG Harbour Redevelopment						
Customer Reference: 17/035						
Soil		Analysed as Soil				
Miscellaneous						
Concept Reference			676021 009	676021 010		
Customer Sample Reference			BH6A 0.00M	BH6A 0.50M		
Date Sampled			Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units		
Organic Matter	T2	A40	0.1	%	3.0	3.2



Concept Reference: 676021										
Project Site: UIG Harbour Redevelopment										
Customer Reference: 17/035										
Soil					Analysed as Soil					
Soil Suite										
Concept Reference					676021 001	676021 002	676021 003	676021 004	676021 005	
Customer Sample Reference					BH1 0.00M	BH1 5.80M	BH1 10.30M	BH8A 1.00M	BH8A 5.30M	
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units						
Leach Prep (2:1)	T2	AR			Extracted	Extracted	Extracted	Extracted	Extracted	
pH	T7	A40			8.9	9.0	8.6	9.1	8.1	
(Acid Soluble) SO4	T192	AR	0.01	%	0.16	0.14	0.26	0.16	0.53	
Sulphur (total)	T6	A40	0.01	%	0.09	0.19	0.34	0.14	1.7	

Concept Reference: 676021										
Project Site: UIG Harbour Redevelopment										
Customer Reference: 17/035										
Soil					Analysed as Soil					
Soil Suite										
Concept Reference					676021 006	676021 007	676021 008	676021 009		
Customer Sample Reference					BH9 0.90M	BH9 3.80M	BH9 9.10M	BH6A 0.00M		
Date Sampled					Deviating	Deviating	Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units						
Leach Prep (2:1)	T2	AR			Extracted	Extracted	Extracted	Extracted		
pH	T7	A40			8.9	7.9	8.1	9.3		
(Acid Soluble) SO4	T192	AR	0.01	%	0.17	0.76	0.37	0.35		
Sulphur (total)	T6	A40	0.01	%	0.18	1.7	0.48	0.77		

Concept Reference: 676021
Project Site: UIG Harbour Redevelopment
Customer Reference: 17/035

Leachate 2:1 Analysed as Water
Suite A

Concept Reference					676021 001	676021 002	676021 003	676021 004	676021 005
Customer Sample Reference					BH1 0.00M	BH1 5.80M	BH1 10.30M	BH8A 1.00M	BH8A 5.30M
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	<0.05	<0.05	0.43	<0.05	1.5
Chloride	T686	2:1	1	mg/l	920	1100	2400	1300	2200
Magnesium	T82	2:1	1	mg/l	24	35	210	28	170
Nitrate	T686	2:1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5	1.7
Dissolved SO4(Total)	T285	2:1	10	mg/l	491	379	844	374	1397

Concept Reference: 676021
Project Site: UIG Harbour Redevelopment
Customer Reference: 17/035

Leachate 2:1 Analysed as Water
Suite A

Concept Reference					676021 006	676021 007	676021 008	676021 009
Customer Sample Reference					BH9 0.90M	BH9 3.80M	BH9 9.10M	BH6A 0.00M
Date Sampled					Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units				
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	<0.05	3.2	2.2	2.1
Chloride	T686	2:1	1	mg/l	2100	1900	570	2300
Magnesium	T82	2:1	1	mg/l	44	160	220	5
Nitrate	T686	2:1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5
Dissolved SO4(Total)	T285	2:1	10	mg/l	646	1900	1199	381

Index to symbols used in 676021-1

Value	Description
AR	As Received
2:1	Leachate 2:1
A40	Assisted dried < 40C
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T7	Probe
T2	Grav
T686	Discrete Analyser
T6	ICP/OES
T82	ICP/OES (Sim)
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T285	ICP/OES (SIM) (Filtered)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Organic Matter	T2	A40	0.1	%	N	009-010
Leach Prep (2:1)	T2	AR			N	001-009
pH	T7	A40			U	001-009
(Acid Soluble) SO4	T192	AR	0.01	%	N	001-009
Sulphur (total)	T6	A40	0.01	%	N	001-009
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	U	001-009
Chloride	T686	2:1	1	mg/l	U	001-009
Magnesium	T82	2:1	1	mg/l	N	001-009
Nitrate	T686	2:1	0.5	mg/l	U	001-009
Dissolved SO4(Total)	T285	2:1	10	mg/l	N	001-009



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Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: Supplement to previous report number
677646-2

Date of Report: 18-Apr-2018

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17244

Customer Site Reference: UIG Harbour Redevelopment, Skye

Date Job Received at Concept: 22-Aug-2017

Date Analysis Started: 24-Aug-2017

Date Analysis Completed: 05-Sep-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

Concept Reference: 677646

Project Site: UIG Harbour Redevelopment, Skye

Customer Reference: 17/035

Sediment

Analysed as Sediment

Metals Matrix Spike

Concept Reference		677646 001	677646 002	677646 003			
Customer Sample Reference		BH1 0.00M	BH1 0.50-2.00M	BH1 2.00-3.50M			
Date Sampled		18-AUG-2017	18-AUG-2017	18-AUG-2017			
Determinand	Method	Test Sample	LOD	Units			
As Recovery	T750	AR	1	%	100	100	100
Cd Recovery	T750	AR	1	%	100	100	100
Cr Recovery	T750	AR	1	%	100	100	100
Cu Recovery	T750	AR	1	%	100	100	100
Ni Recovery	T750	AR	1	%	100	100	100
Pb Recovery	T750	AR	1	%	100	100	100
Zn Recovery	T750	AR	1	%	100	100	100



Concept Reference: 677646					
Project Site: UIG Harbour Redevelopment, Skye					
Customer Reference: 17/035					
Soil		Analysed as Soil			
PAH Matrix Spike					
Concept Reference					677646 005
Customer Sample Reference					Matrix Spikes
Date Sampled					18-AUG-2017
Determinand	Method	Test Sample	LOD	Units	
Naphthalene Recovery	T429	AR	1	%	100
Acenaphthene Recovery	T429	AR	1	%	100
Phenanthrene Recovery	T429	AR	1	%	100
Chrysene Recovery	T429	AR	1	%	99
Benzo(a)Pyrene Recovery	T429	AR	1	%	90



Concept Reference: 677646
Project Site: UIG Harbour Redevelopment, Skye
Customer Reference: 17/035

Soil Analysed as Soil
PCB Matrix Spike

Concept Reference					677646 005
Customer Sample Reference					Matrix Spikes
Date Sampled					18-AUG-2017
Determinand	Method	Test Sample	LOD	Units	
PCB BZ#28 Recovery	T434	AR	1	%	98
PCB BZ#52 Recovery	T434	AR	1	%	98
PCB BZ#101 Recovery	T434	AR	1	%	92
PCB BZ#118 Recovery	T434	AR	1	%	94
PCB BZ#153 Recovery	T434	AR	1	%	100
PCB BZ#138 Recovery	T434	AR	1	%	96
PCB BZ#180 Recovery	T434	AR	1	%	100



Concept Reference: 677646
Project Site: UIG Harbour Redevelopment, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Marine Scotland Suite

					Concept Reference	677646 001	677646 002	677646 003
					Customer Sample Reference	BH1 0.00M	BH1 0.50-2.00M	BH1 2.00-3.50M
					Date Sampled	18-AUG-2017	18-AUG-2017	18-AUG-2017
Determinand	Method	Test Sample	LOD	Units				
Arsenic	T740	AR	0.5	mg/kg	7.3	7.2	8.8	
Cadmium	T740	AR	0.1	mg/kg	<0.1	<0.1	<0.1	
Chromium	T740	AR	0.5	mg/kg	100	220	120	
Copper	T740	AR	0.5	mg/kg	38	42	58	
Lead	T740	AR	0.5	mg/kg	3.8	4.6	2.5	
Mercury	T355	AR	0.05	mg/kg	⁽¹³⁾ <0.05	⁽¹³⁾ <0.05	⁽¹³⁾ <0.05	
Moisture	T2	AR	0.1	%	26	17	6.9	
Nickel	T740	AR	0.5	mg/kg	140	240	210	
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	<0.35	<0.35	<0.35	
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	<0.05	<0.05	<0.05	
Tributyl tin	T16	AR	0.01	mg/kg	<0.01	0.02	<0.01	
Zinc	T740	AR	1.0	mg/kg	77	96	78	



Concept Reference: 677646
Project Site: UIG Harbour Redevelopment, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Poly-Chlorinated Biphenyls (ICES 7)

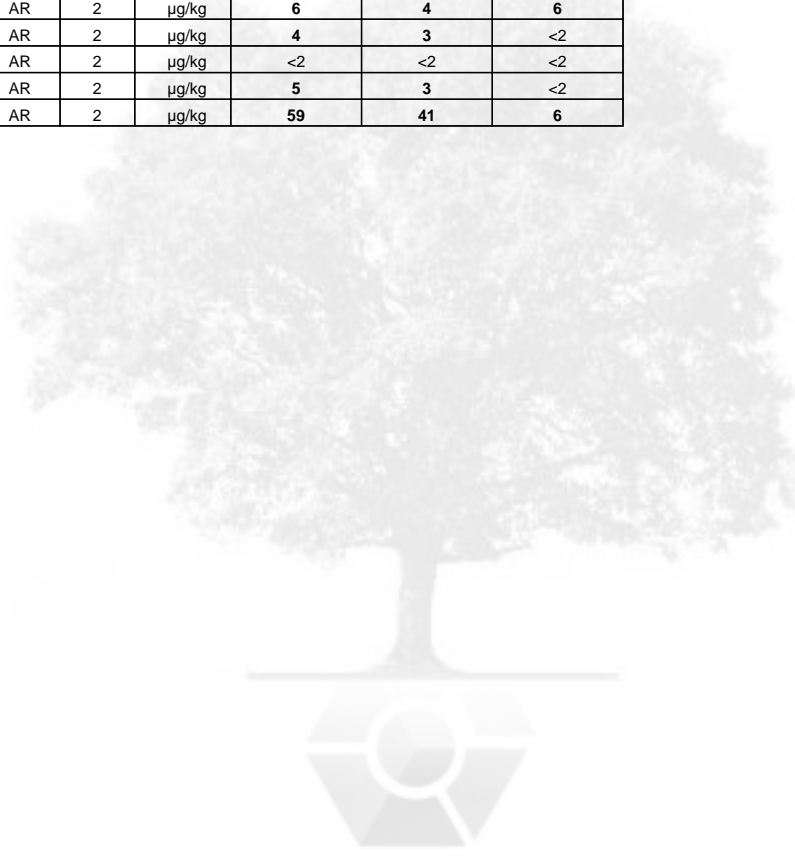
					Concept Reference	677646 001	677646 002	677646 003
					Customer Sample Reference	BH1 0.00M	BH1 0.50-2.00M	BH1 2.00-3.50M
					Date Sampled	18-AUG-2017	18-AUG-2017	18-AUG-2017
Determinand	Method	Test Sample	LOD	Units				
PCB BZ#28	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#52	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#101	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#118	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#153	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#138	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05
PCB BZ#180	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05	<0.05



Concept Reference: 677646
Project Site: UIG Harbour Redevelopment, Skye
Customer Reference: 17/035

Sediment Analysed as Sediment
Total and Speciated USEPA16 PAH

Concept Reference					677646 001	677646 002	677646 003
Customer Sample Reference					BH1 0.00M	BH1 0.50-2.00M	BH1 2.00-3.50M
Date Sampled					18-AUG-2017	18-AUG-2017	18-AUG-2017
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T1	AR	2	µg/kg	(13) <2	(13) <2	(13) <2
Acenaphthylene	T1	AR	2	µg/kg	<2	<2	<2
Acenaphthene	T1	AR	2	µg/kg	<2	<2	<2
Fluorene	T1	AR	2	µg/kg	<2	<2	<2
Phenanthrene	T1	AR	2	µg/kg	(13) 3	(13) 2	(13) <2
Anthracene	T1	AR	2	µg/kg	<2	<2	<2
Fluoranthene	T1	AR	2	µg/kg	(13) 9	(13) 6	(13) <2
Pyrene	T1	AR	2	µg/kg	(13) 11	(13) 6	(13) <2
Benzo(a)Anthracene	T1	AR	2	µg/kg	(13) 6	(13) 5	(13) <2
Chrysene	T1	AR	2	µg/kg	(13) 5	(13) 3	(13) <2
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	10	9	<2
Benzo(a)Pyrene	T1	AR	2	µg/kg	6	4	6
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	4	3	<2
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	<2	<2	<2
Benzo(ghi)Perylene	T1	AR	2	µg/kg	5	3	<2
PAH(total)	T1	AR	2	µg/kg	59	41	6



Index to symbols used in Supplement to previous report number 677646-2

Value	Description
AR	As Received
13	Results have been blank corrected.
N	Analysis is not UKAS accredited

Notes

Supplemental report issued in order to amend sample 002 Tributyl tin result due to laboratory transcription error.

Method Index

Value	Description
T434	GC/MS (HR) (Recovery)
T1	GC/MS (HR)
T429	GC/MS (Recovery)
T16	GC/MS
T355	CVAFS
T2	Grav
T740	ICP/MS (HF)
T750	ICP/MS (Recovery)
T85	Calc

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
As Recovery	T750	AR	1	%	N	001-003
Cd Recovery	T750	AR	1	%	N	001-003
Cr Recovery	T750	AR	1	%	N	001-003
Cu Recovery	T750	AR	1	%	N	001-003
Ni Recovery	T750	AR	1	%	N	001-003
Pb Recovery	T750	AR	1	%	N	001-003
Zn Recovery	T750	AR	1	%	N	001-003
Naphthalene Recovery	T429	AR	1	%	N	005
Acenaphthene Recovery	T429	AR	1	%	N	005
Phenanthrene Recovery	T429	AR	1	%	N	005
Chrysene Recovery	T429	AR	1	%	N	005
Benzo(a)Pyrene Recovery	T429	AR	1	%	N	005
PCB BZ#28 Recovery	T434	AR	1	%	N	005
PCB BZ#52 Recovery	T434	AR	1	%	N	005
PCB BZ#101 Recovery	T434	AR	1	%	N	005
PCB BZ#118 Recovery	T434	AR	1	%	N	005
PCB BZ#153 Recovery	T434	AR	1	%	N	005
PCB BZ#138 Recovery	T434	AR	1	%	N	005
PCB BZ#180 Recovery	T434	AR	1	%	N	005
Arsenic	T740	AR	0.5	mg/kg	N	001-003
Cadmium	T740	AR	0.1	mg/kg	N	001-003
Chromium	T740	AR	0.5	mg/kg	N	001-003
Copper	T740	AR	0.5	mg/kg	N	001-003
Lead	T740	AR	0.5	mg/kg	N	001-003
Mercury	T355	AR	0.05	mg/kg	N	001-003
Moisture	T2	AR	0.1	%	N	001-003
Nickel	T740	AR	0.5	mg/kg	N	001-003
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	N	001-003
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	N	001-003
Tributyl tin	T16	AR	0.01	mg/kg	N	001-003
Zinc	T740	AR	1.0	mg/kg	N	001-003
PCB BZ#28	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#52	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#101	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#118	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#153	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#138	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#180	T1	AR	0.05	µg/kg	N	001-003
Naphthalene	T1	AR	2	µg/kg	N	001-003
Acenaphthylene	T1	AR	2	µg/kg	N	001-003

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Acenaphthene	T1	AR	2	µg/kg	N	001-003
Fluorene	T1	AR	2	µg/kg	N	001-003
Phenanthrene	T1	AR	2	µg/kg	N	001-003
Anthracene	T1	AR	2	µg/kg	N	001-003
Fluoranthene	T1	AR	2	µg/kg	N	001-003
Pyrene	T1	AR	2	µg/kg	N	001-003
Benzo(a)Anthracene	T1	AR	2	µg/kg	N	001-003
Chrysene	T1	AR	2	µg/kg	N	001-003
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	N	001-003
Benzo(a)Pyrene	T1	AR	2	µg/kg	N	001-003
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	N	001-003
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	N	001-003
Benzo(ghi)Perylene	T1	AR	2	µg/kg	N	001-003
PAH(total)	T1	AR	2	µg/kg	N	001-003





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Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 681125-2

Date of Report: 20-Sep-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17257

Customer Site Reference: UIG Harbour Redevelopment

Date Job Received at Concept: 07-Sep-2017

Date Analysis Started: 08-Sep-2017

Date Analysis Completed: 20-Sep-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

Concept Reference: 681125					
Project Site: UIG Harbour Redevelopment					
Customer Reference: 17/035					
Soil Analysed as Soil					
Soil Suite					
Concept Reference					681125 001
Customer Sample Reference					BH2 @0.0
Date Sampled					18-AUG-2017
Determinand	Method	Test Sample	LOD	Units	
Leach Prep (2:1)	T2	AR			Extracted
pH	T7	A40			8.1
(Acid Soluble) SO4	T192	AR	0.01	%	0.17
Sulphur (total)	T6	A40	0.01	%	0.18

Concept Reference: 681125					
Project Site: UIG Harbour Redevelopment					
Customer Reference: 17/035					
Leachate 2:1 Analysed as Water					
Suite A					
Concept Reference					681125 001
Customer Sample Reference					BH2 @0.0
Date Sampled					18-AUG-2017
Determinand	Method	Test Sample	LOD	Units	
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	1.2
Chloride	T686	2:1	1	mg/l	2300
Magnesium	T82	2:1	1	mg/l	68
Nitrate	T686	2:1	0.5	mg/l	<0.5
Dissolved SO4(Total)	T285	2:1	10	mg/l	494

Index to symbols used in 681125-2

Value	Description
A40	Assisted dried < 40C
2:1	Leachate 2:1
AR	As Received
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T7	Probe
T2	Grav
T82	ICP/OES (Sim)
T686	Discrete Analyser
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T6	ICP/OES
T285	ICP/OES (SIM) (Filtered)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Leach Prep (2:1)	T2	AR			N	001
pH	T7	A40			U	001
(Acid Soluble) SO4	T192	AR	0.01	%	N	001
Sulphur (total)	T6	A40	0.01	%	N	001
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	U	001
Chloride	T686	2:1	1	mg/l	U	001
Magnesium	T82	2:1	1	mg/l	N	001
Nitrate	T686	2:1	0.5	mg/l	U	001
Dissolved SO4(Total)	T285	2:1	10	mg/l	N	001



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Concept Life Sciences

Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 681797-1

Date of Report: 20-Sep-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17266

Customer Site Reference: Uig Harbour, Redevelopment

Date Job Received at Concept: 11-Sep-2017

Date Analysis Started: 12-Sep-2017

Date Analysis Completed: 20-Sep-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



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Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

[REDACTED]

Concept Reference: 681797						
Project Site: Uig Harbour, Redevelopment						
Customer Reference: 17/035						
Soil Soil Suite						
Analysed as Soil						
Concept Reference			681797 001	681797 002		
Customer Sample Reference			BH6A 7.50m	BH2 6.50m		
Date Sampled			Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units		
Leach Prep (2:1)	T2	AR			Extracted	Extracted
pH	T7	A40			8.5	9.0
(Acid Soluble) SO4	T192	AR	0.01	%	0.25	0.17
Sulphur (total)	T6	A40	0.01	%	0.55	0.54

Concept Reference: 681797						
Project Site: Uig Harbour, Redevelopment						
Customer Reference: 17/035						
Leachate 2:1 Suite A						
Analysed as Water						
Concept Reference			681797 001	681797 002		
Customer Sample Reference			BH6A 7.50m	BH2 6.50m		
Date Sampled			Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units		
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	0.16	0.46
Chloride	T686	2:1	1	mg/l	1900	1700
Magnesium	T82	2:1	1	mg/l	49	32
Nitrate	T686	2:1	0.5	mg/l	<0.5	<0.5
Dissolved SO4(Total)	T285	2:1	10	mg/l	549	436

Index to symbols used in 681797-1

Value	Description
A40	Assisted dried < 40C
2:1	Leachate 2:1
AR	As Received
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T2	Grav
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T7	Probe
T6	ICP/OES
T285	ICP/OES (SIM) (Filtered)
T82	ICP/OES (Sim)
T686	Discrete Analyser

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Leach Prep (2:1)	T2	AR			N	001-002
pH	T7	A40			U	001-002
(Acid Soluble) SO4	T192	AR	0.01	%	N	001-002
Sulphur (total)	T6	A40	0.01	%	N	001-002
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	U	001-002

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Chloride	T686	2:1	1	mg/l	U	001-002
Magnesium	T82	2:1	1	mg/l	N	001-002
Nitrate	T686	2:1	0.5	mg/l	U	001-002
Dissolved SO4(Total)	T285	2:1	10	mg/l	N	001-002





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Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 683576-1

Date of Report: 28-Sep-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17285

Customer Site Reference: UIG Harbour Redevelopment

Date Job Received at Concept: 19-Sep-2017

Date Analysis Started: 20-Sep-2017

Date Analysis Completed: 28-Sep-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



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Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

Concept Reference: 683576							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Soil				Analysed as Soil			
Miscellaneous							
		Concept Reference		683576 001	683576 004	683576 005	
		Customer Sample Reference		BH3 4.50m	BH4 5.0m	BH5 4.5m	
		Date Sampled		Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units			
Organic Matter	T2	A40	0.1	%	2.6	5.0	7.6

Concept Reference: 683576							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Soil				Analysed as Soil			
Soil Suite							
		Concept Reference		683576 002	683576 003		
		Customer Sample Reference		BH3 7.50m	BH4 0.0m		
		Date Sampled		Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units			
Leach Prep (2:1)	T2	AR			Extracted	Extracted	
pH	T7	A40			9.9	9.2	
(Acid Soluble) SO4	T192	AR	0.01	%	0.06	0.12	
Sulphur (total)	T6	A40	0.01	%	1.0	0.27	

Concept Reference: 683576							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Leachate 2:1				Analysed as Water			
Suite A							
		Concept Reference		683576 002	683576 003		
		Customer Sample Reference		BH3 7.50m	BH4 0.0m		
		Date Sampled		Deviating	Deviating		
Determinand	Method	Test Sample	LOD	Units			
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	0.23	<0.05	
Chloride	T686	2:1	1	mg/l	180	580	
Magnesium	T82	2:1	1	mg/l	<1	4	
Nitrate	T686	2:1	0.5	mg/l	<0.5	<0.5	
Dissolved SO4(Total)	T285	2:1	10	mg/l	159	245	

Index to symbols used in 683576-1

Value	Description
A40	Assisted dried < 40C
AR	As Received
2:1	Leachate 2:1
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T7	Probe
T285	ICP/OES (SIM) (Filtered)
T686	Discrete Analyser

T192	HCl Extraction/ICP/OES (TRL 447 T2)
T82	ICP/OES (Sim)
T2	Grav
T6	ICP/OES

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Organic Matter	T2	A40	0.1	%	N	001,004-005
Leach Prep (2:1)	T2	AR			N	002-003
pH	T7	A40			U	002-003
(Acid Soluble) SO4	T192	AR	0.01	%	N	002-003
Sulphur (total)	T6	A40	0.01	%	N	002-003
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	U	002-003
Chloride	T686	2:1	1	mg/l	U	002-003
Magnesium	T82	2:1	1	mg/l	N	002-003
Nitrate	T686	2:1	0.5	mg/l	U	002-003
Dissolved SO4(Total)	T285	2:1	10	mg/l	N	002-003





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Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
East Kilbride
G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 687648-2

Date of Report: 20-Oct-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17336

Customer Site Reference: UIG Harbour Redevelopment

Date Job Received at Concept: 06-Oct-2017

Date Analysis Started: 06-Oct-2017

Date Analysis Completed: 20-Oct-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

[REDACTED]

Concept Reference: 687648							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Sediment		Analysed as Sediment					
Marine Scotland Suite							
Concept Reference				687648 001	687648 002	687648 003	
Customer Sample Reference				BH DS1 0.3m	BH DS1 1.50m	BH DS1 3.0m	
Determinand	Method	Test Sample	LOD	Units			
Arsenic	T740	AR	0.5	mg/kg	8.1	6.4	7.0
Cadmium	T740	AR	0.1	mg/kg	0.2	0.2	0.2
Chromium	T740	AR	0.5	mg/kg	310	460	330
Copper	T740	AR	0.5	mg/kg	97	43	62
Lead	T740	AR	0.5	mg/kg	7.6	4.0	3.8
Nickel	T740	AR	0.5	mg/kg	210	260	250
Zinc	T740	AR	1.0	mg/kg	120	100	110
Mercury	T355	AR	0.05	mg/kg	⁽¹³⁾ <0.05	⁽¹³⁾ <0.05	⁽¹³⁾ <0.05
Moisture	T2	AR	0.1	%	14	12	11
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	3.53	<0.35	<0.35
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	9.2	<0.05	<0.05
Tributyl tin	T16	AR	0.01	mg/kg	<0.01	<0.01	<0.01

Concept Reference: 687648							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Sediment		Analysed as Sediment					
Poly-Chlorinated Biphenyls (ICES 7)							
Concept Reference				687648 001	687648 002	687648 003	
Customer Sample Reference				BH DS1 0.3m	BH DS1 1.50m	BH DS1 3.0m	
Determinand	Method	Test Sample	LOD	Units			
PCB BZ#28	T1	AR	0.05	µg/kg	<0.05	<0.05	<0.05
PCB BZ#52	T1	AR	0.05	µg/kg	0.39	<0.05	<0.05
PCB BZ#101	T1	AR	0.05	µg/kg	0.91	<0.05	<0.05
PCB BZ#118	T1	AR	0.05	µg/kg	0.74	<0.05	<0.05
PCB BZ#153	T1	AR	0.05	µg/kg	0.54	<0.05	<0.05
PCB BZ#138	T1	AR	0.05	µg/kg	0.73	<0.05	<0.05
PCB BZ#180	T1	AR	0.05	µg/kg	0.22	<0.05	<0.05

Concept Reference: 687648							
Project Site: UIG Harbour Redevelopment							
Customer Reference: 17/035							
Sediment		Analysed as Sediment					
Total and Speciated USEPA16 PAH							
Concept Reference				687648 001	687648 002	687648 003	
Customer Sample Reference				BH DS1 0.3m	BH DS1 1.50m	BH DS1 3.0m	
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T1	AR	2	µg/kg	⁽¹³⁾ <2	⁽¹³⁾ 3	⁽¹³⁾ <2
Acenaphthylene	T1	AR	2	µg/kg	5	34	4
Acenaphthene	T1	AR	2	µg/kg	2	7	<2
Fluorene	T1	AR	2	µg/kg	<2	7	8
Phenanthrene	T1	AR	2	µg/kg	⁽¹³⁾ 21	⁽¹³⁾ 98	⁽¹³⁾ 28
Anthracene	T1	AR	2	µg/kg	11	37	8
Fluoranthene	T1	AR	2	µg/kg	67	340	25
Pyrene	T1	AR	2	µg/kg	62	310	19
Benzo(a)Anthracene	T1	AR	2	µg/kg	⁽¹³⁾ 32	⁽¹³⁾ 150	⁽¹³⁾ 8
Chrysene	T1	AR	2	µg/kg	29	130	8
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	65	280	12
Benzo(a)Pyrene	T1	AR	2	µg/kg	36	160	7
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	22	88	4
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	6	20	<2
Benzo(ghi)Perylene	T1	AR	2	µg/kg	26	110	4
PAH(total)	T1	AR	2	µg/kg	380	1800	140

Index to symbols used in 687648-2

Value	Description
AR	As Received
13	Results have been blank corrected.
N	Analysis is not UKAS accredited

Notes

PCB and ICP/MS analysis was carried out at Concept Life Sciences Manchester.
The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T16	GC/MS
T85	Calc
T355	CVAFS
T2	Grav
T1	GC/MS (HR)
T740	ICP/MS (HF)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Arsenic	T740	AR	0.5	mg/kg	N	001-003
Cadmium	T740	AR	0.1	mg/kg	N	001-003
Chromium	T740	AR	0.5	mg/kg	N	001-003
Copper	T740	AR	0.5	mg/kg	N	001-003
Lead	T740	AR	0.5	mg/kg	N	001-003
Nickel	T740	AR	0.5	mg/kg	N	001-003
Zinc	T740	AR	1.0	mg/kg	N	001-003
Mercury	T355	AR	0.05	mg/kg	N	001-003
Moisture	T2	AR	0.1	%	N	001-003
PCB EC7 (Sum)	T85	AR	0.35	µg/kg	N	001-003
PCB (Total Tri-Hepta)	T16	AR	0.05	µg/kg	N	001-003
Tributyl tin	T16	AR	0.01	mg/kg	N	001-003
PCB BZ#28	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#52	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#101	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#118	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#153	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#138	T1	AR	0.05	µg/kg	N	001-003
PCB BZ#180	T1	AR	0.05	µg/kg	N	001-003
Naphthalene	T1	AR	2	µg/kg	N	001-003
Acenaphthylene	T1	AR	2	µg/kg	N	001-003
Acenaphthene	T1	AR	2	µg/kg	N	001-003
Fluorene	T1	AR	2	µg/kg	N	001-003
Phenanthrene	T1	AR	2	µg/kg	N	001-003
Anthracene	T1	AR	2	µg/kg	N	001-003
Fluoranthene	T1	AR	2	µg/kg	N	001-003
Pyrene	T1	AR	2	µg/kg	N	001-003
Benzo(a)Anthracene	T1	AR	2	µg/kg	N	001-003
Chrysene	T1	AR	2	µg/kg	N	001-003
Benzo(b/k)Fluoranthene	T1	AR	2	µg/kg	N	001-003
Benzo(a)Pyrene	T1	AR	2	µg/kg	N	001-003
Indeno(123-cd)Pyrene	T1	AR	2	µg/kg	N	001-003
Dibenzo(ah)Anthracene	T1	AR	2	µg/kg	N	001-003
Benzo(ghi)Perylene	T1	AR	2	µg/kg	N	001-003
PAH(total)	T1	AR	2	µg/kg	N	001-003



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Certificate of Analysis

16 Langlands Place
Kelvin South Business
Park
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G75 0YF
Tel : 01355 573340
Fax : 01355 573341

Report Number: 689661-1

Date of Report: 23-Oct-2017

Customer: Holequest
Winston Road
Galashiels
TD1 2DA

Customer Contact: [REDACTED]

Customer Job Reference: 17/035

Customer Purchase Order: 17354

Customer Site Reference: UIG Harbour Redevelopment

Date Job Received at Concept: 14-Oct-2017

Date Analysis Started: 17-Oct-2017

Date Analysis Completed: 23-Oct-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

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

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Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :

[REDACTED]
[REDACTED]

Issued by :

[REDACTED]
[REDACTED]

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Soil					Analysed as Soil				
Miscellaneous									
Concept Reference					689661 001	689661 002	689661 005	689661 006	689661 008
Customer Sample Reference					BH DS1 0.00-1.50M	BH DS1 4.50-6.00M	BH7 0.00-1.00M	BH7 1.00-2.50M	TP3 0.80M
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
Organic Matter	T2	A40	0.1	%	1.4	3.7	3.1	2.6	3.1

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Soil					Analysed as Soil				
Miscellaneous									
Concept Reference					689661 009				
Customer Sample Reference					TP3 3.00M				
Date Sampled					Deviating				
Determinand	Method	Test Sample	LOD	Units					
Organic Matter	T2	A40	0.1	%	3.0				

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Soil					Analysed as Soil				
Soil Suite									
Concept Reference					689661 001	689661 002	689661 003	689661 004	689661 005
Customer Sample Reference					BH DS1 0.00-1.50M	BH DS1 4.50-6.00M	BH DS1 6.00-7.50M	BH DS1 7.50-9.00M	BH7 0.00-1.00M
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
pH	T7	A40			9.2	8.4	9.5	8.9	8.3
(Acid Soluble) SO4	T192	AR	0.01	%	0.11	0.33	0.07	0.17	0.43
Sulphur (total)	T6	A40	0.01	%	0.08	1.2	0.11	0.31	0.81

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Soil					Analysed as Soil				
Soil Suite									
Concept Reference					689661 007				
Customer Sample Reference					BH7 8.50-10.00M				
Date Sampled					Deviating				
Determinand	Method	Test Sample	LOD	Units					
pH	T7	A40			9.6				
(Acid Soluble) SO4	T192	AR	0.01	%	0.13				
Sulphur (total)	T6	A40	0.01	%	0.91				

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Leachate 2:1					Analysed as Water				
Suite A									
Concept Reference				689661 001	689661 002	689661 003	689661 004	689661 005	
Customer Sample Reference				BH DS1 0.00-1.50M	BH DS1 4.50-6.00M	BH DS1 6.00-7.50M	BH DS1 7.50-9.00M	BH7 0.00-1.00M	
Date Sampled				Deviating	Deviating	Deviating	Deviating	Deviating	
Determinand	Method	Test Sample	LOD	Units					
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	<0.05	0.10	0.54	1.0	<0.05
Chloride	T686	2:1	1	mg/l	580	1700	340	1100	120
Magnesium	T82	2:1	1	mg/l	10	81	2	29	86
Nitrate	T686	2:1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved SO4(Total)	T285	2:1	10	mg/l	305	1964	280	505	1922

Concept Reference: 689661									
Project Site: UIG Harbour Redevelopment									
Customer Reference: 17/035									
Leachate 2:1					Analysed as Water				
Suite A									
Concept Reference				689661 007					
Customer Sample Reference				BH7 8.50-10.00M					
Date Sampled				Deviating					
Determinand	Method	Test Sample	LOD	Units					
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	<0.05				
Chloride	T686	2:1	1	mg/l	29				
Magnesium	T82	2:1	1	mg/l	<1				
Nitrate	T686	2:1	0.5	mg/l	<0.5				
Dissolved SO4(Total)	T285	2:1	10	mg/l	547				

Index to symbols used in 689661-1

Value	Description
A40	Assisted dried < 40C
2:1	Leachate 2:1
AR	As Received
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T2	Grav
T192	HCl Extraction/ICP/OES (TRL 447 T2)
T7	Probe
T686	Discrete Analyser
T6	ICP/OES
T285	ICP/OES (SIM) (Filtered)
T82	ICP/OES (Sim)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Organic Matter	T2	A40	0.1	%	N	001-002,005-006,008-009
pH	T7	A40			U	001-005,007
(Acid Soluble) SO4	T192	AR	0.01	%	N	001-005,007
Sulphur (total)	T6	A40	0.01	%	N	001-005,007

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Ammonia expressed as NH4	T686	2:1	0.05	mg/l	U	001-005,007
Chloride	T686	2:1	1	mg/l	U	001-005,007
Magnesium	T82	2:1	1	mg/l	N	001-005,007
Nitrate	T686	2:1	0.5	mg/l	U	001-005,007
Dissolved SO4(Total)	T285	2:1	10	mg/l	N	001-005,007



Appendix B Aspect Survey Vibro-Core Sampling and Testing Extract

5. CONDUCT OF VIBROCORE SAMPLING

The vibrocore apparatus used was a lightweight SDI Vibecore 4D system with 76mm aluminium extruded pipe being used to recover the core. The system does not rely on overall mass but the vibrational frequency of the equipment and liquefaction of surrounding sediments to enable effective penetration. It is therefore reliant on the moisture content in the sediment.

The portability and simplicity of this equipment facilitates rapid deployment at an alternate location should the previous location provide a poor return.

The aim was to collect 3 cores in total across the site, of up to 3m in length, from sample points indicated on Figure 1.

The vessel was manoeuvred to each of the locations in turn and secured to the existing pier in order to avoid swinging during the sampling operation.

All vibrocore locations were sampled on 2nd & 3rd April 2018 at the following locations:

VIBROCORE POINT	SAMPLED EASTING	SAMPLED NORTHING	CORE LENGTH
VB3_3	138657.3	863558.7	2.1m
VB4_1	138778.8	863341.6	1.0m
VB5_2	138711.6	863549.2	1.4m

6. EQUIPMENT USED FOR SAMPLING

A Speciality Devices Incorporated D-4 vibrocorer was used for all samples. A 76mm diameter, 3m long core was fitted for all sample attempts and each core tube was constructed of aluminium.

The sediment was pushed out of the core tube prior to sampling the cores and then sampled with care being taken not to sample material that had come into contact with the sample tube wall.



FIGURE 2 - SDI D-4 VIBROCORER AND CORE ON DECK OF JOHANNA G

7. SAMPLE ANALYSIS

The laboratory analysis was carried out by SOCOTEC. The intention was that all vibrocore samples would be sub sampled at 0.5m intervals at the top middle and bottom of the length of the core and each sub sample analysed for Particle Size, Metals, WAC and Booster Biocides. The lab reporting is rendered with this report under separate cover:

A6542_Uig_Pre-disposal Sampling Results Form_MAR00025.xlsx

TEST REPORT



Report No. EFS/184704 (Ver. 1)

SOCOTEC UK Limited Bretby (Marine)
Derwent House
Bretby Business Park
Ashby Road
Burton Upon Trent
Staffordshire
DE15 0YZ

Site: MAR00025

The 11 samples described in this report were registered for analysis by SOCOTEC UK Limited on 11-Apr-2018. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 30-Apr-2018

Tests where the accreditation is set to N or No, and any individual data items marked with a * are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

- Table 1 Main Analysis Results (Pages 2 to 4)
- Table of WAC Analysis Results (Pages 5 to 13)
- Analytical and Deviating Sample Overview (Page 14)
- Table of Additional Report Notes (Page 15)
- Table of Method Descriptions (Page 16)
- Table of Report Notes (Page 17)
- Table of Sample Descriptions (Appendix A Page 1 of 1)


On behalf of
SOCOTEC UK Limited


Operations Director
Energy & Waste Services

Date of Issue: 30-Apr-2018

Tests marked '^' have been subcontracted to another laboratory.


Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected. SOCOTEC UK Limited accepts no responsibility for any sampling not carried out by our personnel.

			Units :	Mol/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg								
			Method Codes :	ANC	BTEXHSA	BTEXHSA	BTEXHSA	BTEXHSA	BTEXHSA	BTEXHSA	BTEXHSA	LOI(%MM)	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS							
			Method Reporting Limits :	0.04	10	10	20	20	10	10	30	0.2	0.08	0.08	0.08	0.08	0.08	0.08	0.08							
			UKAS Accredited :	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes							
LAB ID Number	Client Sample Description	Sample Date	Acid Neut. Capacity	Benzene	Ethyl Benzene	m/p Xylenes	MTBE	o Xylene	Toluene	Xylenes	L.O.I. % @ 450C	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(ghi)perylene								
1900261	A6542 - 4_1_1	02-Apr-18	10.32	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	3.7	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900262	A6542 - 4_1_2	02-Apr-18	6.16	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	3.9	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900263	A6542 - 4_1_3	02-Apr-18	2.44	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	3.6	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900264	A6542 - 3_3_1	03-Apr-18	1.76	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	11.0	< 0.08 §	< 0.08 §	< 0.08 §	0.15 §	0.17 §	0.18 §	0.10 §								
1900265	A6542 - 3_3_2	03-Apr-18	1.24	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	8.1	< 0.08 §	< 0.08 §	0.12 §	0.36 §	0.37 §	0.39 §	0.19 §								
1900266	A6542 - 3_3_3	03-Apr-18	4.68	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	3.3	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900267	A6542 - 5_2_1	03-Apr-18	4.32	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	9.1	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900268	A6542 - 5_2_2	03-Apr-18	4.00	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	7.3	< 0.08 §	< 0.08 §	< 0.08 §	0.85 §	0.87 §	1.28 §	0.36 §								
1900269	A6542 - 5_2_3	03-Apr-18	4.00	< 10.0 §	< 10.0* §	< 20.0* §	< 20.0 §	< 10.0 §	< 10.0 §	<30 §	4.0	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900271	QC Blank		<0.04	<10 §	<10 §	<20 §	<20 §	<10 §	<10 §	<30 §		< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §								
1900272	Reference Material (% Recovery)		97	95 §	88 §	88 §	98 §	90 §	87 §	89 §	102	98 §	100 §	94 §	95 §	96 §	88 §	77 §								
 <p>Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422</p>			Client Name	SOCOTEC UK Limited Bretby (Marine)								Sample Analysis														
			Contact	[REDACTED]																						
			MAR00025								Date Printed	27-Apr-2018														
																			Report Number	EFS/184704						
																			Table Number	1						

		Units :	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	
		Method Codes :	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PAHMSUS	PCBECD	PCBECD	PCBECD	PCBECD	PCBECD	
		Method Reporting Limits :	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	1.28	5	5	5	5	5	
		UKAS Accredited :	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
LAB ID Number	Client Sample Description	Sample Date	Benzo(k)fluoranthene	Chrysene	Coronene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH (Sum of USEPA 16)	PCB 101	PCB 118	PCB 138	PCB 153	PCB 180
1900261	A6542 - 4_1_1	02-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900262	A6542 - 4_1_2	02-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900263	A6542 - 4_1_3	02-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900264	A6542 - 3_3_1	03-Apr-18	< 0.08 §	0.13 §	< 0.08	< 0.08 §	0.27 §	< 0.08 §	< 0.08 §	< 0.08 §	0.15 §	0.42 §	2.22 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900265	A6542 - 3_3_2	03-Apr-18	0.18 §	0.29 §	< 0.08	< 0.08 §	0.62 §	< 0.08 §	0.20 §	< 0.08 §	0.29 §	0.59 §	4 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900266	A6542 - 3_3_3	03-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900267	A6542 - 5_2_1	03-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900268	A6542 - 5_2_2	03-Apr-18	0.60 §	1.54 §	0.09	0.08 §	0.97 §	< 0.08 §	0.39 §	< 0.08 §	0.11 §	1.00 §	8.45 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900269	A6542 - 5_2_3	03-Apr-18	< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900271	QC Blank		< 0.08 §	< 0.08 §	< 0.08	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 0.08 §	< 1.28 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §	< 5.00 §
1900272	Reference Material (% Recovery)		86 §	97 §	89	81 §	92 §	91 §	87 §	99 §	93 §	93 §	91 §	89 §	92 §	88 §	92 §	79 §
 <p>Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422</p>			Client Name SOCOTEC UK Limited Bretby (Marine) Contact ██████████									Sample Analysis						
			<h1>MAR00025</h1>									Date Printed 27-Apr-2018						
												Report Number EFS/184704						
												Table Number 1						

Units :	µg/kg	µg/kg	pH Units	%	mg/kg	mg/kg	% M/M										
Method Codes :	PCBECD	PCBECD	PHSOIL	TMSS	TPHFIDUS	TPHFIDUS	WSLM59										
Method Reporting Limits :	5	5		0.1	10	10	0.02										
UKAS Accredited :	Yes	Yes	Yes	Yes	Yes	Yes	Yes										

LAB ID Number CL/	Client Sample Description	Sample Date	PCB 28	PCB 52	pH units (AR)	Tot.Moisture @ 105C	TPH Band (>C10-C40)	TPH by GC/FID (AR)	Total Organic Carbon								
1900262	A6542 - 4_1_2	02-Apr-18	< 5.00 §	< 5.00 §	8.6 §	24.5 §	10.6 §	12.0 §	0.42 §								
1900263	A6542 - 4_1_3	02-Apr-18	< 5.00 §	< 5.00 §	8.9 §	19.8 §	< 10.0 §	< 10.0 §	0.30 §								
1900264	A6542 - 3_3_1	03-Apr-18	< 5.00 §	< 5.00 §	7.9 §	57.5 §	1510 §	1510 §	3.53 §								
1900265	A6542 - 3_3_2	03-Apr-18	< 5.00 §	< 5.00 §	8.4 §	51.5 §	629 §	630 §	2.61 §								
1900266	A6542 - 3_3_3	03-Apr-18	< 5.00 §	< 5.00 §	9 §	22.0 §	13.4 §	14.6 §	0.39 §								
1900267	A6542 - 5_2_1	03-Apr-18	65.1 §	< 5.00 §	8.4 §	40.6 §	126 §	127 §	2.11 §								
1900268	A6542 - 5_2_2	03-Apr-18	< 5.00 §	< 5.00 §	8.2 §	34.8 §	174 §	175 §	1.63 §								
1900269	A6542 - 5_2_3	03-Apr-18	< 5.00 §	< 5.00 §	8.8 §	29.6 §	10.6 §	12.0 §	0.74 §								
1900271	QC Blank		<5.00 §	<5.00 §			<10 §	<10 §	<0.02 §								
1900272	Reference Material (% Recovery)		82 §	93 §	98 §		93 §	93 §	112 §								

 Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422	Client Name	SOCOTEC UK Limited Bretby (Marine)		MAR00025		Sample Analysis		
	Contact	██████████						Date Printed
							Report Number	EFS/184704

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.292	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	25.3
					Equivalent Weight based on drying at 105°C (kg)	0.225
					Volume of water required to carry out 2:1 stage (litres)	0.383
					Fraction of sample above 4 mm %	
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 4_1_1		s18_4704	CL/1900261	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
					Weight of Deionised water to carry out 8:1 stage (kg)	
					1.650	

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	0.542§	3	5	6
N	LOI450	Loss on Ignition (%)	3.7			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0802	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.049	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	28.51§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<1.82	100		
N	PHSOIL	pH (pH units)	8.6 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	10.36		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	7.5	8.9	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	9590	2650					
U	ICPMSW	Arsenic	0.008	0.003	0.016	0.04	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.002	<0.002	<0.02	0.5	10	70
U	ICPMSW	Copper	0.003	0.002	0.006	0.02	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.101	0.163	0.202	1.55	0.5	10	30
U	ICPMSW	Nickel	0.002	0.001	0.004	0.01	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.003	0.003	0.006	0.03	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.003	<0.002	<0.03	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	2910	661	5820	9609	800	15000	25000
U	ISEF	Fluoride	1	1.3	2	13	10	150	500
U	ICPWATVAR	Sulphate as SO4	590	183	1180	2373	1000	20000	50000
N	WSLM27	Total Dissolved Solids	7480	2060	14960	27827	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	8.6	16	17.2	150	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.341	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	24.5
					Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.334	
				Fraction of sample above 4 mm %		
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 4_1_2		s18_4704	CL/1900262	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
				Weight of Deionised water to carry out 8:1 stage (kg)		1.650

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	0.426§	3	5	6
N	LOI450	Loss on Ignition (%)	4			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0796	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.049	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	14.04§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<1.80	100		
N	PHSOIL	pH (pH units)	8.6 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	6.25		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}				mg/kg (dry weight)		mg/kg (dry weight)
U	WSLM3	pH (pH units) ^{oo}	7.6	7.8	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	11400	1330					
U	ICPMSW	Arsenic	0.009	0.019	0.018	0.18	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	<0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	<0.001	<0.002	<0.01	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.274	0.038	0.548	0.69	0.5	10	30
U	ICPMSW	Nickel	0.003	<0.001	0.006	<0.01	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.005	0.003	0.01	0.03	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.001	<0.002	<0.01	0.1	0.5	7
U	ICPMSW	Zinc	0.005	<0.002	0.01	<0.02	4	50	200
U	KONENS	Chloride	3660	308	7320	7549	800	15000	25000
U	ISEF	Fluoride	1.1	0.7	2.2	8	10	150	500
U	ICPWATVAR	Sulphate as SO4	691	109	1382	1866	1000	20000	50000
N	WSLM27	Total Dissolved Solids	8900	1040	17800	20880	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	7.1	2.7	14.2	33	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.271	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	19.8
					Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.404	
				Fraction of sample above 4 mm %		
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 4_1_3		s18_4704	CL/1900263	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
				Weight of Deionised water to carry out 8:1 stage (kg)		1.650

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	0.301§	3	5	6
N	LOI450	Loss on Ignition (%)	3.6			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0745	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.042	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	<12.47§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<1.70	100		
N	PHSOIL	pH (pH units)	8.9 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	2.45		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}				mg/kg (dry weight)		mg/kg (dry weight)
U	WSLM3	pH (pH units) ^{oo}	8.1	8.7	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	7620	992					
U	ICPMSW	Arsenic	0.022	0.031	0.044	0.3	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	<0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	0.001	<0.002	<0.01	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.039	0.01	0.078	0.14	0.5	10	30
U	ICPMSW	Nickel	0.003	0.001	0.006	0.01	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.005	0.004	0.01	0.04	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.001	<0.002	<0.01	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	2320	217	4640	4974	800	15000	25000
U	ISEF	Fluoride	1.1	0.6	2.2	7	10	150	500
U	ICPWATVAR	Sulphate as SO4	394	127	788	1626	1000	20000	50000
N	WSLM27	Total Dissolved Solids	5940	774	11880	14628	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	3.9	1.9	7.8	22	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data	
Contact	[REDACTED]			Weight of sample (kg)	0.417
Site	MAR00025			Moisture content @ 105°C (% of Wet Weight)	57.5
				Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.258
				Fraction of sample above 4 mm %	
				Fraction of non-crushable material %	
				Volume to undertake analysis (2:1 Stage) (litres)	0.300
				Weight of Deionised water to carry out 8:1 stage (kg)	1.650
	Sample Description	Report No	Sample No	Issue Date	
	A6542 - 3_3_1	s18_4704	CL/1900264	30-Apr-18	

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	3.745§	3	5	6
N	LOI450	Loss on Ignition (%)	11.7			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.1415	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.084	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	3550§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<5.4	100		
N	PHSOIL	pH (pH units)	7.9 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	1.87		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	8.7	8.6	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	7270	2970					
U	ICPMSW	Arsenic	0.081	0.004	0.162	0.14	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	0.001	<0.002	<0.01	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.138	0.059	0.276	0.7	0.5	10	30
U	ICPMSW	Nickel	0.008	<0.001	0.016	<0.02	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.009	0.003	0.018	0.04	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.003	<0.002	<0.03	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	2300	774	4600	9775	800	15000	25000
U	ISEF	Fluoride	1.8	1.4	3.6	15	10	150	500
U	ICPWATVAR	Sulphate as SO4	926	134	1852	2396	1000	20000	50000
N	WSLM27	Total Dissolved Solids	5670	2310	11340	27580	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	6.8	16	13.6	148	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data	
Contact	[REDACTED]			Weight of sample (kg)	0.278
Site	MAR00025			Moisture content @ 105°C (% of Wet Weight)	51.5
				Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.397
				Fraction of sample above 4 mm %	
				Fraction of non-crushable material %	
				Volume to undertake analysis (2:1 Stage) (litres)	0.300
				Weight of Deionised water to carry out 8:1 stage (kg)	1.650
	Sample Description	Report No	Sample No	Issue Date	
	A6542 - 3_3_2	s18_4704	CL/1900265	30-Apr-18	

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	3.263§	3	5	6
N	LOI450	Loss on Ignition (%)	10.1			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.1238	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.07	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	1300§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<8.41	100		
N	PHSOIL	pH (pH units)	8.4 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	1.55		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	8.4	9.2	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	9040	1530					
U	ICPMSW	Arsenic	0.004	0.005	0.008	0.05	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	0.004	<0.002	<0.04	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.18	0.08	0.36	0.93	0.5	10	30
U	ICPMSW	Nickel	<0.001	0.003	<0.002	<0.03	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.004	0.004	0.008	0.04	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.001	<0.002	<0.01	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	0.003	<0.004	<0.03	4	50	200
U	KONENS	Chloride	2880	363	5760	6986	800	15000	25000
U	ISEF	Fluoride	1.4	0.8	2.8	9	10	150	500
U	ICPWATVAR	Sulphate as SO4	242	352	484	3373	1000	20000	50000
N	WSLM27	Total Dissolved Solids	7050	1200	14100	19800	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	0.06	<0.1	<0.6	1		
N	WSLM13	Dissolved Organic Carbon	15	4.3	30	57	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.288	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	22.0
					Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.387	
				Fraction of sample above 4 mm %		
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 3_3_3		s18_4704	CL/1900266	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
				Weight of Deionised water to carry out 8:1 stage (kg)	1.650	

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	0.400§	3	5	6
N	LOI450	Loss on Ignition (%)	3.4			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0764	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.042	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	17.18§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<1.74	100		
N	PHSOIL	pH (pH units)	9 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	4.81		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	8	9.4	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	22300	1200					
U	ICPMSW	Arsenic	0.018	0.155	0.036	1.37	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	0.001	<0.002	<0.01	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.064	0.036	0.128	0.4	0.5	10	30
U	ICPMSW	Nickel	<0.001	0.011	<0.002	<0.1	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	<0.001	0.004	<0.002	<0.04	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.002	<0.002	<0.02	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	8150	249	16300	13025	800	15000	25000
U	ISEF	Fluoride	1.1	1	2.2	10	10	150	500
U	ICPWATVAR	Sulphate as SO4	528	246	1056	2836	1000	20000	50000
N	WSLM27	Total Dissolved Solids	17400	935	34800	31303	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	11	5.4	22	61	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.441	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	40.6
					Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.234	
				Fraction of sample above 4 mm %		
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 5_2_1		s18_4704	CL/1900267	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
				Weight of Deionised water to carry out 8:1 stage (kg)		1.650

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	2.182§	3	5	6
N	LOI450	Loss on Ignition (%)	9.4			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.1014	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.1576	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	212§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<2.29	100		
N	PHSOIL	pH (pH units)	8.4 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	4.47		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	8.1	8	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	22200	1230					
U	ICPMSW	Arsenic	0.011	0.013	0.022	0.13	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	<0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	0.003	<0.002	<0.03	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.359	0.015	0.718	0.61	0.5	10	30
U	ICPMSW	Nickel	<0.001	<0.001	<0.002	<0.01	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.001	0.002	0.002	0.02	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.001	<0.002	<0.01	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	8350	274	16700	13508	800	15000	25000
U	ISEF	Fluoride	0.9	0.7	1.8	7	10	150	500
U	ICPWATVAR	Sulphate as SO4	499	89	998	1437	1000	20000	50000
N	WSLM27	Total Dissolved Solids	17300	959	34600	31378	4000	60000	100000
U	SFAPI	Phenol Index	0.16	<0.05	0.32	<0.6	1		
N	WSLM13	Dissolved Organic Carbon	17	3.5	34	53	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data	
Contact	[REDACTED]			Weight of sample (kg)	0.381
Site	MAR00025			Moisture content @ 105°C (% of Wet Weight)	34.8
				Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.294
				Fraction of sample above 4 mm %	
				Fraction of non-crushable material %	
				Volume to undertake analysis (2:1 Stage) (litres)	0.300
				Weight of Deionised water to carry out 8:1 stage (kg)	1.650
	Sample Description	Report No	Sample No	Issue Date	
	A6542 - 5_2_2	s18_4704	CL/1900268	30-Apr-18	

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	1.648§	3	5	6
N	LOI450	Loss on Ignition (%)	7.4			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0919	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.056	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	267§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	13.1	100		
N	PHSOIL	pH (pH units)	8.2 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	4.04		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	7.9	8.7	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	17300	2380	Calculated data not UKAS Accredited				
U	ICPMSW	Arsenic	0.018	0.007	0.036	0.08	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.001	<0.002	<0.01	0.5	10	70
U	ICPMSW	Copper	<0.001	<0.001	<0.002	<0.01	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.206	0.106	0.412	1.19	0.5	10	30
U	ICPMSW	Nickel	<0.001	0.003	<0.002	<0.03	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.004	0.005	0.008	0.05	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.002	<0.002	<0.02	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	6150	602	12300	13417	800	15000	25000
U	ISEF	Fluoride	1.1	1.4	2.2	14	10	150	500
U	ICPWATVAR	Sulphate as SO4	815	320	1630	3860	1000	20000	50000
N	WSLM27	Total Dissolved Solids	13500	1860	27000	34120	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	8	9.9	16	96	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

Tests where the accreditation is set to U are UKAS accredited, those where the accreditation is set to N are not UKAS accredited

WASTE ACCEPTANCE CRITERIA TESTING BSEN 12457/3

Client	SOCOTEC UK Limited Bretby (Marine)			Leaching Data		
Contact	[REDACTED]			Weight of sample (kg)	0.317	
Site	MAR00025				Moisture content @ 105°C (% of Wet Weight)	29.6
					Equivalent Weight based on drying at 105°C (kg)	0.225
				Volume of water required to carry out 2:1 stage (litres)	0.358	
				Fraction of sample above 4 mm %		
Sample Description		Report No	Sample No	Issue Date	Fraction of non-crushable material %	
A6542 - 5_2_3		s18_4704	CL/1900269	30-Apr-18	Volume to undertake analysis (2:1 Stage) (litres)	
				Weight of Deionised water to carry out 8:1 stage (kg)		1.650

Note: The >4mm fraction is crushed using a disc mill

Accreditation	Method Code	Solid Waste Analysis (Dry Basis)	Concentration in Solid (Dry Weight Basis)	Landfill Waste Acceptance Criteria Limit Values		
				Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
N	WSLM59	Total Organic Carbon (% M/M)	0.755§	3	5	6
N	LOI450	Loss on Ignition (%)	4.1			10
U	BTEXHSA	Sum of BTEX (mg/kg)	<0.0856	6		
U	PCBUSECD	Sum of 7 Congener PCB's (mg/kg)	<0.049	1		
N	TPHFIDUS	Mineral Oil (mg/kg)	15.06§	500		
N	PAHMSUS	PAH Sum of 17 (mg/kg)	<1.93	100		
N	PHSOIL	pH (pH units)	8.8 §		>6	
N	ANC	Acid Neutralisation Capacity (mol/kg) @pH 7	4.08		To be evaluated	To be evaluated

Accreditation	Method Code	Leachate Analysis	2:1 Leachate	8:1 Leachate	Calculated amount leached @ 2:1	Calculated cumulative amount leached @ 10:1	Landfill Waste Acceptance Criteria Limit Values for BSEN 12457/3 @ L/S 10 litre kg-1		
			mg/l except ^{oo}		mg/kg (dry weight)		mg/kg (dry weight)		
U	WSLM3	pH (pH units) ^{oo}	8.6	9.1	Calculated data not UKAS Accredited				
U	WSLM2	Conductivity (µs/cm) ^{oo}	11100	1630					
U	ICPMSW	Arsenic	0.181	0.174	0.362	1.75	0.5	2	25
U	ICPWATVAR	Barium	<0.01	<0.01	<0.02	<0.1	20	100	300
U	ICPMSW	Cadmium	<0.0001	<0.0001	<0.0002	<0.001	0.04	1	5
U	ICPMSW	Chromium	<0.001	0.003	<0.002	<0.03	0.5	10	70
U	ICPMSW	Copper	<0.001	0.006	<0.002	<0.05	2	50	100
U	ICPMSW	Mercury	<0.0001	<0.0001	<0.0002	<0.001	0.01	0.2	2
U	ICPMSW	Molybdenum	0.522	0.183	1.044	2.28	0.5	10	30
U	ICPMSW	Nickel	0.006	0.027	0.012	0.24	0.4	10	40
U	ICPMSW	Lead	<0.001	<0.001	<0.002	<0.01	0.5	10	50
U	ICPMSW	Antimony	0.045	0.018	0.09	0.22	0.06	0.7	5
U	ICPMSW	Selenium	<0.001	0.005	<0.002	<0.04	0.1	0.5	7
U	ICPMSW	Zinc	<0.002	<0.002	<0.004	<0.02	4	50	200
U	KONENS	Chloride	3540	378	7080	7996	800	15000	25000
U	ISEF	Fluoride	0.8	0.7	1.6	7	10	150	500
U	ICPWATVAR	Sulphate as SO4	724	916	1448	8904	1000	20000	50000
N	WSLM27	Total Dissolved Solids	8640	1270	17280	22527	4000	60000	100000
U	SFAPI	Phenol Index	<0.05	<0.05	<0.1	<0.5	1		
N	WSLM13	Dissolved Organic Carbon	12	12	24	120	500	800	1000

Template Ver. 1 Landfill Waste Acceptance Criteria limit values correct as of 11th March 2009.

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Customer SOCOTEC UK Limited Bretby (Marine)
Site MAR00025
Report No S184704

Consignment No S73786
Date Logged 11-Apr-2018
In-House Report Due 25-Apr-2018

Please note the results for any subcontracted analysis (identified with a '^') is likely to take up to an additional five working days.

ID Number	Description	MethodID	ANC	BTEX/MSA	CEN/Leach/MS	CEN/Leach/MS	CEN/Leach/MS	ICP/MS	Mercury (MS) Low Level Sediments	Lead (MS) Sediments	Chromium (MS) Sediments	Cadmium (MS) Sediments	Arsenic (MS) Sediments	Copper (MS) Sediment	Report B >63 µm	Zinc (MS) Sediments	Nickel (MS) Sediments	L.O.I. % @ 450C	PAH (17) by GCMS	PCB/CD Congeners Analysis	PH/Soil pH units (AR)	TMSS Tot.Moisture @ 105C	TPH/Fluor TPH Band (>C10-C40)	W/SLM/59 Total Organic Carbon
				MTBE (µg/kg)	CEN/Leach(P1)	CEN/Leach(P2)	BTEX-HSA + MTBE analysis	Acid Neut. Capacity																
CL/1900261	A6542 - 4_1_1	02/04/18		✓	✓				✓	✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓
CL/1900262	A6542 - 4_1_2	02/04/18																						
CL/1900263	A6542 - 4_1_3	02/04/18																						
CL/1900264	A6542 - 3_3_1	03/04/18																						
CL/1900265	A6542 - 3_3_2	03/04/18																						
CL/1900266	A6542 - 3_3_3	03/04/18																						
CL/1900267	A6542 - 5_2_1	03/04/18																						
CL/1900268	A6542 - 5_2_2	03/04/18																						
CL/1900269	A6542 - 5_2_3	03/04/18																						
CL/1900271	QC Blank																							
CL/1900272	Reference Material (% Recovery)																							

Note: We will endeavour to prioritise samples to complete analysis within holding time; however any delay could result in samples becoming deviant whilst being processed in the laboratory.

If sampling dates are missing or matrices unclassified then results will not be ISO 17025 accredited. Please contact us as soon as possible to provide missing information in order to reinstate accreditation.

Deviating Sample Key	
A	The sample was received in an inappropriate container for this analysis
B	The sample was received without the correct preservation for this analysis
C	Headspace present in the sample container
D	The sampling date was not supplied so holding time may be compromised - applicable to all analysis
E	Sample processing did not commence within the appropriate holding time
F	Sample processing did not commence within the appropriate handling time
Requested Analysis Key	
Green	Analysis Required
Yellow	Analysis dependant upon trigger result - Note: due date may be affected if triggered
White	No analysis scheduled
^	Analysis Subcontracted - Note: due date may vary

Where individual results are flagged see report notes for status.

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
BTEXHSA	CL1900261 TO CL1900269	The Primary process control data associated with this Test has not wholly met the requirements of the Laboratory Quality Management System QMS with one or more target analytes falling outside acceptable limits. However the remaining data gives the Laboratory confidence that the test has performed satisfactorily and that the validity of the data may not have been significantly affected. However in line with our QMS policy we have removed accreditation from the affected analytes (Ethylbenzene, M/P xylenes) . These circumstances should be taken into consideration when utilising the data”

Method Descriptions

Matrix	MethodID	Analysis Basis	Method Description
Soil	ANC	Oven Dried @ < 35°C	Quantitative digestion with Hydrochloric Acid back titration with 1M Sodium Hydroxide to pH 7
Soil	BTEXHSA	As Received	Determination of Benzene, Toluene, Ethyl benzene and Xylenes (BTEX) by Headspace GCFID
Soil	ICPMSS	Oven Dried @ < 35°C	Determination of Metals in Marine Sediments and Soil samples by aqua regia digestion followed by ICPMS detection
Soil	LOI(%MM)	Oven Dried @ < 35°C	Determination of loss on ignition for soil samples at specified temperature by gravimetry
Soil	PAHMSUS	As Received	Determination of Polycyclic Aromatic Hydrocarbons (PAH) by hexane/acetone extraction followed by GCMS detection
Soil	PCBECD	As Received	Determination of Polychlorinated Biphenyl (PCB) congeners/arocloris by hexane/acetone extraction followed by GCECD detection
Soil	PHSOIL	As Received	Determination of pH of 2.5:1 deionised water to soil extracts using pH probe.
Soil	TMSS	As Received	Determination of the Total Moisture content at 105°C by loss on oven drying gravimetric analysis (% based upon wet weight)
Soil	TPHFIDUS	As Received	Determination of hexane/acetone extractable Hydrocarbons in soil with GCFID detection.
Soil	WSLM59	Oven Dried @ < 35°C	Determination of Organic Carbon in soil using sulphurous Acid digestion followed by high temperature combustion and IR detection
Water	ICPMSW	As Received	Direct quantitative determination of Metals in water samples using ICPMS
Water	ICPWATVAR	As Received	Direct determination of Metals and Sulphate in water samples using ICPOES
Water	ISEF	As Received	Determination of Fluoride in water samples by Ion Selective Electrode (ISE)
Water	KONENS	As Received	Direct analysis using discrete colorimetric analysis
Water	SFAPI	As Received	Segmented flow analysis with colorimetric detection
Water	WSLM13	As Received	Instrumental analysis using acid/persulphate digestion and non-dispersive IR detection
Water	WSLM2	As Received	Determination of the Electrical Conductivity ($\mu\text{S}/\text{cm}$) by electrical conductivity probe.
Water	WSLM27	As Received	Gravimetric Determination
Water	WSLM3	As Received	Determination of the pH of water samples by pH probe

Where individual results are flagged see report notes for status.

Report Notes

Generic Notes

Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

Waters Analysis

Unless stated otherwise results are expressed as mg/l

Nil: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm³ @ 15°C

Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

Asbestos Analysis

CH Denotes Chrysotile

TR Denotes Tremolite

CR Denotes Crocidolite

AC Denotes Actinolite

AM Denotes Amosite

AN Denotes Anthophyllite

NAIIS No Asbestos Identified in Sample

NADIS No Asbestos Detected In Sample

Symbol Reference

^ Sub-contracted analysis.

\$\$ Unable to analyse due to the nature of the sample

¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

¥ Results for guidance only due to possible interference

& Blank corrected result

I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined

N.Det Not detected

N.F No Flow

NS Information Not Supplied

Req Analysis requested, see attached sheets for results

▯ Raised detection limit due to nature of the sample

* All accreditation has been removed by the laboratory for this result

‡ MCERTS accreditation has been removed for this result

§ accreditation has been removed for this result as it is a non-accredited matrix

Note: The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

