



ANALYTICAL TEST REPORT

Contract no: 95736
Contract name: BS3882 Topsoil
Client reference: -
Clients name: Neal Soil Suppliers
Clients address: Ty-To-Maen Farm
Newton Road
Rumney, Cardiff
CF3 2EJ

Samples received: 16 Dec 2020
Analysis started: 16 Dec 2020
Analysis completed: 22 Dec 2020
Report issued: 22 Dec 2020

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

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

Approved by:

Dave Bowerbank
Customer Services Co-ordinator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

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

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

Analytical results are inclusive of stones.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
95736	BS3882 Topsoil	-	Sandy Loam	-	-	13

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SOILS

Lab number			95736
Sample id			BS3882
Depth (m)			Topsoil
Date sampled			14/12/2020
Test	Method	Units	
Arsenic (total)	CE127 ^M	mg/kg As	6
Cadmium (total)	CE127 ^M	mg/kg Cd	0.22
Chromium (total)	CE127 ^M	mg/kg Cr	25
Chromium (VI)	CE146	mg/kg CrVI	<1
Copper (total)	CE127 ^M	mg/kg Cu	30
Lead (total)	CE127 ^M	mg/kg Pb	28
Mercury (total)	CE127 ^M	mg/kg Hg	<0.5
Nickel (total)	CE127 ^M	mg/kg Ni	30
Selenium (total)	CE127 ^M	mg/kg Se	0.21
Zinc (total)	CE127 ^M	mg/kg Zn	66
pH	CE004 ^M	units	8.1
PAH			
Naphthalene	CE087 ^M	mg/kg	<0.02
Acenaphthylene	CE087 ^M	mg/kg	<0.02
Acenaphthene	CE087 ^M	mg/kg	<0.02
Fluorene	CE087 ^U	mg/kg	<0.02
Phenanthrene	CE087 ^M	mg/kg	<0.02
Anthracene	CE087 ^U	mg/kg	<0.02
Fluoranthene	CE087 ^M	mg/kg	<0.02
Pyrene	CE087 ^M	mg/kg	<0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	<0.02
Chrysene	CE087 ^M	mg/kg	<0.05
Benzo(b)fluoranthene	CE087 ^M	mg/kg	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	<0.36
TPH			
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01
EPH Aromatic (>EC10-EC12)	CE068	mg/kg	<0.01
EPH Aromatic (>EC12-EC16)	CE068	mg/kg	<0.01
EPH Aromatic (>EC16-EC21)	CE068	mg/kg	<0.01
EPH Aromatic (>EC21-EC35)	CE068	mg/kg	<0.01
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1
EPH Aliphatic (>C10-C12)	CE068	mg/kg	<0.01

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SOILS

Lab number			95736
Sample id			BS3882
Depth (m)			Topsoil
Date sampled			14/12/2020
Test	Method	Units	
EPH Aliphatic (>C12-C16)	CE068	mg/kg	<0.01
EPH Aliphatic (>C16-C35)	CE068	mg/kg	<0.01
Total Aliphatic/Aromatic (>C5-C35)	-	mg/kg	< 2
Subcontracted analysis			
Asbestos (qualitative)	\$	-	NAD

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE068	EPH Aromatic (>EC10-EC12)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC12-EC16)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC16-EC21)	Solvent extraction, GC-FID	As received		1	mg/kg
CE068	EPH Aromatic (>EC21-EC35)	Solvent extraction, GC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE068	EPH Aliphatic (>C10-C12)	Solvent extraction, GC-FID	As received		4	mg/kg
CE068	EPH Aliphatic (>C12-C16)	Solvent extraction, GC-FID	As received		4	mg/kg
CE068	EPH Aliphatic (>C16-C35)	Solvent extraction, GC-FID	As received		4	mg/kg
-	Total Aliphatic/Aromatic (>C5-C35)	Solvent extraction, GC-FID	As received		16	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

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

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
95736	BS3882 Topsoil	-	N	

DECLARATION OF COMPLIANCE (BS3882:2015)



Lab ref 95736-1
Soil source BS3882 Topsoil
OS Grid reference Not supplied
Date sampled 14 Dec 2020

Date received 16 Dec 2020
Analysis started 16 Dec 2020
Analysis completed 22 Dec 2020
Report issued 22 Dec 2020

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	16	Y	Y	Y	Y	Y	Y
Silt content	% w/w	22	Y	Y	Y	Y	Y	Y
Sand content	% w/w	62	Y	Y	Y	Y	Y	Y
Soil texture	class	Sandy Loam						

Stone content								
>2mm	% w/w	4	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y

Mass loss on ignition								
Clay 5-20%	% w/w	6.2	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH	pH units	8.1	Y	N	Y	Y	N	Y
Carbonate (calcareous only)	% w/w	11.5			Y			Y
Nitrogen (total)	% w/w N	0.31	Y	Y	Y			
Carbon:Nitrogen ratio	-	12.2	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	43	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	310	Y	Y	Y	Y	Y	Y
Magnesium (extractable)	mg/l Mg	241	Y	Y	Y	Y	Y	Y
Electrical conductivity	µS/cm	2050	Y					

Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	36	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	32	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	68	Y	Y	Y	Y	Y	Y

VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	0	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	0	Y	Y	Y	Y	Y	Y

DECLARATION

I certify that this sample has been analysed in accordance with BS3882:2015.

Signature

Name

Dave Bowerbank

Position

Customer Services Co-ordinator