

A303 Amesbury to Berwick Down

**Applicant's provision of technical reports supporting the
Environmental Information Review**

Ground Investigation - Phase 6 & 7 Factual Report
Appendix E

Document reference: Redetermination 2.12

Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

February 2022



APPENDIX E - GEOENVIRONMENTAL TESTING

- (i) Laboratory Test Results
- (ii) Laboratory UKAS Accreditation Certificate

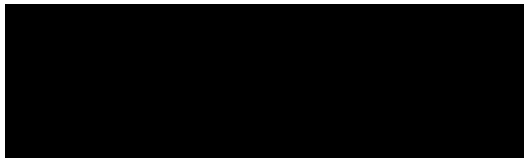
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/08308
Issue Number: 1
Date: 23 October, 2018

Client: Structural Soils Limited (Bristol)
The Old School
Stillhouse Lane
Bedminster
Bristol
UK
BS3 4EB

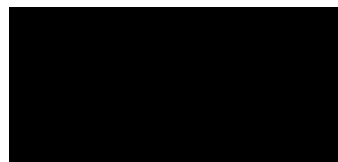
Project Manager: enviro@soils.co.uk/Mike Addinall
Project Name: A303 Stonehenge Phase 6 Ground Investigation
Project Ref: 733442
Order No: N/A
Date Samples Received: 04/10/18
Date Instructions Received: 10/10/18
Date Analysis Completed: 23/10/18

Prepared by:



Richard Wong
Client Manager

Approved by:



Georgia King
Admin & Client Services Supervisor

Envirolab Job Number: 18/08308

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08308/1									Units	Method ref
Client Sample No	102										
Client Sample ID	BHR7 1821										
Depth to Top	0.40										
Depth To Bottom											
Date Sampled	02-Oct-18										
Sample Type	Soil - ES										
Sample Matrix Code	4A										
PAH-16MS											
Acenaphthene _A ^{M#}	<0.01									mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01									mg/kg	A-T-019s
Anthracene _A ^{M#}	<0.02									mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04									mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.04									mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.05									mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05									mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07									mg/kg	A-T-019s
Chrysene _A ^{M#}	<0.06									mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04									mg/kg	A-T-019s
Fluoranthene _A ^{M#}	0.09									mg/kg	A-T-019s
Fluorene _A ^{M#}	<0.01									mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.03									mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03									mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.03									mg/kg	A-T-019s
Pyrene _A ^{M#}	<0.07									mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	0.24									mg/kg	A-T-019s

Envirolab Job Number: 18/08308

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08308/1									Units	Method ref
Client Sample No	102										
Client Sample ID	BHR7 1821										
Depth to Top	0.40										
Depth To Bottom											
Date Sampled	02-Oct-18										
Sample Type	Soil - ES										
Sample Matrix Code	4A										
TPH CWG											
Ali >C5-C6 _A [#]	<0.01									mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01									mg/kg	A-T-022s
Ali >C8-C10 _A ^{M#}	<1									mg/kg	A-T-055s
Ali >C10-C12 _A ^{M#}	<1									mg/kg	A-T-055s
Ali >C12-C16 _A ^{M#}	<1									mg/kg	A-T-055s
Ali >C16-C21 _A ^{M#}	<1									mg/kg	A-T-055s
Ali >C21-C35 _A	3									mg/kg	A-T-055s
Total Aliphatics >C5-C35 _A	3									mg/kg	A-T-055s
Aro >C5-C7 _A [#]	<0.01									mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01									mg/kg	A-T-022s
Aro >C8-C10 _A ^{M#}	<1									mg/kg	A-T-055s
Aro >C10-C12 _A ^{M#}	<1									mg/kg	A-T-055s
Aro >C12-C16 _A	<1									mg/kg	A-T-055s
Aro >C16-C21 _A ^{M#}	<1									mg/kg	A-T-055s
Aro >C21-C35 _A ^{M#}	8									mg/kg	A-T-055s
Total Aromatics >C5-C35 _A	8									mg/kg	A-T-055s
TPH (Ali & Aro >C5-C35) _A	10									mg/kg	A-T-055s
BTEX - Benzene _A [#]	<0.01									mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01									mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01									mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01									mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01									mg/kg	A-T-022s
MTBE _A [#]	<0.01									mg/kg	A-T-022s

REPORT NOTES

General:

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

All samples contained within this report, and any received with the same delivery, will be disposed of one month after the date of this report.

Analytical results reflect the quality of the sample at the time of analysis only.

Opinions and interpretations expressed are outside the scope of our accreditation.

If results are in italic font they are associated with an AQC failure, these are not accredited and are unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.

Soil chemical analysis:

All results are reported as dry weight (<40 °C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any "A" subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any "D" subscripts.

TPH analysis of water by method A-T-007:

Free and visible oils are excluded from the sample used for analysis so that the reported result represents the dissolved phase only.

Electrical Conductivity of water by Method A-T-037:

Results greater than 12900µS/cm @ 25 °C / 11550µS/cm @ 20 °C fall outside the calibration range and as such are unaccredited.

Asbestos:

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis.

Quantification of asbestos is a 3 stage process including visual identification, hand picking and weighing and fibre counting by sedimentation/phase contrast optical microscopy if required. If asbestos is identified as being present but is not in a form that is suitable for analysis by hand picking and weighing (normally if the asbestos is present as free fibres) quantification by sedimentation is performed.

Where ACMs are found a percentage asbestos is assigned to each with reference to 'HSG264, Asbestos: The survey guide' and the calculated asbestos content is expressed as a percentage of the dried soil sample aliquot used.

Predominant Matrix Codes:

1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample.

Samples with Matrix Code 7 & 8 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations, with the exception of bulk asbestos which are BSEN 17025 accredited.

Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

US indicates Unsuitable Sample for analysis.

NDP indicates No Determination Possible.

NAD indicates No Asbestos Detected.

N/A indicates Not Applicable.

Superscript # indicates method accredited to ISO 17025.

Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.

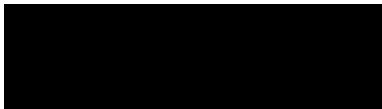
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/08216
Issue Number: 1
Date: 23 October, 2018

Client: Structural Soils Limited (Bristol)
The Old School
Stillhouse Lane
Bedminster
Bristol
UK
BS3 4EB

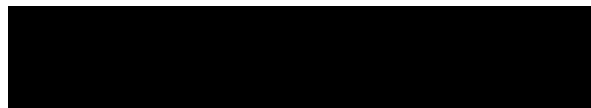
Project Manager: enviro@soils.co.uk/Mike Addinall
Project Name: A303 Stonehenge Phase 6 Ground Investigation
Project Ref: 733442
Order No: N/A
Date Samples Received: 04/10/18
Date Instructions Received: 10/10/18
Date Analysis Completed: 23/10/18

Prepared by:



Gill Walker
Director/Laboratory Manager

Approved by:



Danielle Brierley
Client Manager

Envirolab Job Number: 18/08216

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08216/1								Units	Method ref
Client Sample No	101									
Client Sample ID	R71805									
Depth to Top	0.30									
Depth To Bottom										
Date Sampled	02-Oct-18									
Sample Type	Soil - ES									
Sample Matrix Code	4AE									
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD									A-T-045
Asbestos ACM - Suitable for Water Absorption Test?	N/A									

Envirolab Job Number: 18/08216

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08216/1									Units	Method ref
Client Sample No	101										
Client Sample ID	R71805										
Depth to Top	0.30										
Depth To Bottom											
Date Sampled	02-Oct-18										
Sample Type	Soil - ES										
Sample Matrix Code	4AE										
PAH-16MS											
Acenaphthene _A ^{M#}	<0.01									mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01									mg/kg	A-T-019s
Anthracene _A ^{M#}	<0.02									mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	<0.04									mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	<0.04									mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	<0.05									mg/kg	A-T-019s
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Chrysene _A ^{M#}	<0.06									mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04									mg/kg	A-T-019s
Fluoranthene _A ^{M#}	<0.08									mg/kg	A-T-019s
Fluorene _A ^{M#}	<0.01									mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03									mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03									mg/kg	A-T-019s
Phenanthrene _A ^{M#}	<0.03									mg/kg	A-T-019s
Pyrene _A ^{M#}	<0.07									mg/kg	A-T-019s
Total PAH-16MS _A ^{M#}	<0.08									mg/kg	A-T-019s

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TPH analysis of water by method A-T-007:

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Key:

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N/A indicates Not Applicable.

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Superscript "M" indicates method accredited to MCERTS.

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Please contact us if you need any further information.

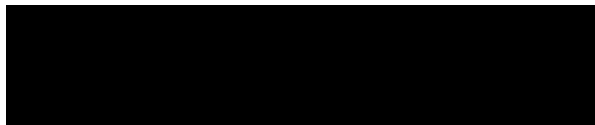
FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 18/08233
Issue Number: 1
Date: 19 October, 2018

Client: Structural Soils Limited (Bristol)
The Old School
Stillhouse Lane
Bedminster
Bristol
UK
BS3 4EB

Project Manager: enviro@soils.co.uk/Glen Spence/Mike Addinall
Project Name: A303 Stonehenge Phase 6 Ground Investigation
Project Ref: 733442
Order No: N/A
Date Samples Received: 08/10/18
Date Instructions Received: 08/10/18
Date Analysis Completed: 18/10/18

Prepared by:



Danielle Brierley
Client Manager

Approved by:



Iain Haslock
Analytical Consultant

Envirolab Job Number: 18/08233

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08233/1									Units	Method ref
Client Sample No	101										
Client Sample ID	R71817										
Depth to Top	0.10										
Depth To Bottom											
Date Sampled	04-Oct-18										
Sample Type	Soil - ES										
Sample Matrix Code	4AE										
% Stones >10mm _A	26.0									% w/w	A-T-044
pH _D ^{M#}	7.76									pH	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.02									g/l	A-T-026s
Organic matter _D ^{M#}	6.0									% w/w	A-T-032 OM
Arsenic _D ^{M#}	<1									mg/kg	A-T-024s
Cadmium _D ^{M#}	1.5									mg/kg	A-T-024s
Copper _D ^{M#}	9									mg/kg	A-T-024s
Chromium _D ^{M#}	16									mg/kg	A-T-024s
Lead _D ^{M#}	16									mg/kg	A-T-024s
Mercury _D	<0.17									mg/kg	A-T-024s
Nickel _D ^{M#}	13									mg/kg	A-T-024s
Selenium _D [#]	<1									mg/kg	A-T-024s
Zinc _D ^{M#}	44									mg/kg	A-T-024s

Envirolab Job Number: 18/08233

Client Project Name: A303 Stonehenge Phase 6 Ground Investigation

Client Project Ref: 733442

Lab Sample ID	18/08233/1								Units	Method ref
Client Sample No	101									
Client Sample ID	R71817									
Depth to Top	0.10									
Depth To Bottom										
Date Sampled	04-Oct-18									
Sample Type	Soil - ES									
Sample Matrix Code	4AE									
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01							mg/kg	A-T-019s	
Acenaphthylene _A ^{M#}	<0.01							mg/kg	A-T-019s	
Anthracene _A ^{M#}	<0.02							mg/kg	A-T-019s	
Benzo(a)anthracene _A ^{M#}	<0.04							mg/kg	A-T-019s	
Benzo(a)pyrene _A ^{M#}	<0.04							mg/kg	A-T-019s	
Benzo(b)fluoranthene _A ^{M#}	<0.05							mg/kg	A-T-019s	
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Benzo(k)fluoranthene _A ^{M#}	<0.07							mg/kg	A-T-019s	
Chrysene _A ^{M#}	<0.06							mg/kg	A-T-019s	
Dibenzo(ah)anthracene _A ^{M#}	<0.04							mg/kg	A-T-019s	
Fluoranthene _A ^{M#}	<0.08							mg/kg	A-T-019s	
Fluorene _A ^{M#}	<0.01							mg/kg	A-T-019s	
Indeno(123-cd)pyrene _A ^{M#}	<0.03							mg/kg	A-T-019s	
Naphthalene _A ^{M#}	<0.03							mg/kg	A-T-019s	
Phenanthrene _A ^{M#}	<0.03							mg/kg	A-T-019s	
Pyrene _A ^{M#}	<0.07							mg/kg	A-T-019s	
Total PAH-16MS _A ^{M#}	<0.08							mg/kg	A-T-019s	

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Lab Sample ID	18/08233/1									Units	Method ref
Client Sample No	101										
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Depth to Top	0.10										
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Total Aliphatics >C5-C35 _A	5								mg/kg	A-T-055s	
Aro >C5-C7 _A [#]	<0.01								mg/kg	A-T-022s	
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Aro >C21-C35 _A ^{M#}	16								mg/kg	A-T-055s	
Total Aromatics >C5-C35 _A	18								mg/kg	A-T-055s	
TPH (Ali & Aro >C5-C35) _A	22								mg/kg	A-T-055s	
BTEX - Benzene _A [#]	<0.01								mg/kg	A-T-022s	
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BTEX - m & p Xylene _A [#]	<0.01								mg/kg	A-T-022s	
BTEX - o Xylene _A [#]	<0.01								mg/kg	A-T-022s	
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TPH analysis of water by method A-T-007:

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Secondary Matrix Codes:

A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal,

E = contains roots/twigs.

Key:

IS indicates Insufficient Sample for analysis.

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N/A indicates Not Applicable.

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Superscript "M" indicates method accredited to MCERTS.

Subscript "A" indicates analysis performed on the sample as received.

Subscript "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve

Please contact us if you need any further information.



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Wales (No 2514788)

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 744940-1

Date of Report: 09-Jul-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Customer Site Reference: A303 Stonehenge Phase 6 Ground
Investigation

Date Job Received at Concept: 15-Jun-2018

Date Analysis Started: 18-Jun-2018

Date Analysis Completed: 09-Jul-2018

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 :
Aneta Dybek-Echtermeyer
Customer Service Advisor

Issued by :
Aneta Dybek-Echtermeyer
Customer Service Advisor

Concept Reference: 744940
Project Site: A303 Stonehenge Phase 6 Ground Investigation
Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
Suite F.3

Concept Reference	744940 001	744940 002	744940 003	744940 004	744940 005
Customer Sample Reference	BHR602 SUB SAMPLE 1	BHR602 SUB SAMPLE 2	BHR602	BHR602 SUB SAMPLE 1	BHR602 SUB SAMPLE 2
Depth	14.90-15.10	14.90-15.10	19.95-20.00	24.35-24.50	24.35-24.50
Top Depth	14.90-15.10	14.90-15.10	19.95-20.00	24.35-24.50	24.35-24.50
Date Sampled	Deviating	Deviating	Deviating	Deviating	Deviating
AGS Type	D	D	D	D	D
AGS Sample Reference	12	12	16	19	19

Determinand	Method	Test Sample	LOD	Units					
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	<0.5	<0.5	(IS)	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1	<1	(IS)	<1
P (Total)	T303	2:1-1	1	mg/l	<1	<1	<1	(IS)	<1
Chloride	T686	2:1-1	1	mg/l	2	2	2	(IS)	3
Sulphate	T11	2:1-1	0.05	mg/l	12	11	3.3	(IS)	2.1
Calcium	T6	2:1-1	0.1	mg/l	22	20	13	(IS)	18
Magnesium	T6	2:1-1	0.1	mg/l	0.2	0.1	0.2	(IS)	0.2
Potassium	T6	2:1-1	0.1	mg/l	<0.1	<0.1	<0.1	(IS)	<0.1
Sodium	T6	2:1-1	0.1	mg/l	1.0	0.7	0.9	(IS)	1.2
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	61	98	26000	(IS)	320
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	50	100	21000	(IS)	260

Concept Reference: 744940
Project Site: A303 Stonehenge Phase 6 Ground Investigation
Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
Suite F.3

Concept Reference	744940 006
Customer Sample Reference	BHR602
Depth	29.70-29.80
Top Depth	29.70-29.80
Date Sampled	Deviating
AGS Type	D
AGS Sample Reference	23

Determinand	Method	Test Sample	LOD	Units	
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1
P (Total)	T303	2:1-1	1	mg/l	<1
Chloride	T686	2:1-1	1	mg/l	2
Sulphate	T11	2:1-1	0.05	mg/l	3.1
Calcium	T6	2:1-1	0.1	mg/l	15
Magnesium	T6	2:1-1	0.1	mg/l	0.2
Potassium	T6	2:1-1	0.1	mg/l	0.1
Sodium	T6	2:1-1	0.1	mg/l	0.9
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	37
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	50

Index to symbols used in 744940-1

Value	Description
2:1-1	Leachate to BS EN 12457-1 (2:1)
IS	Insufficient Sample
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

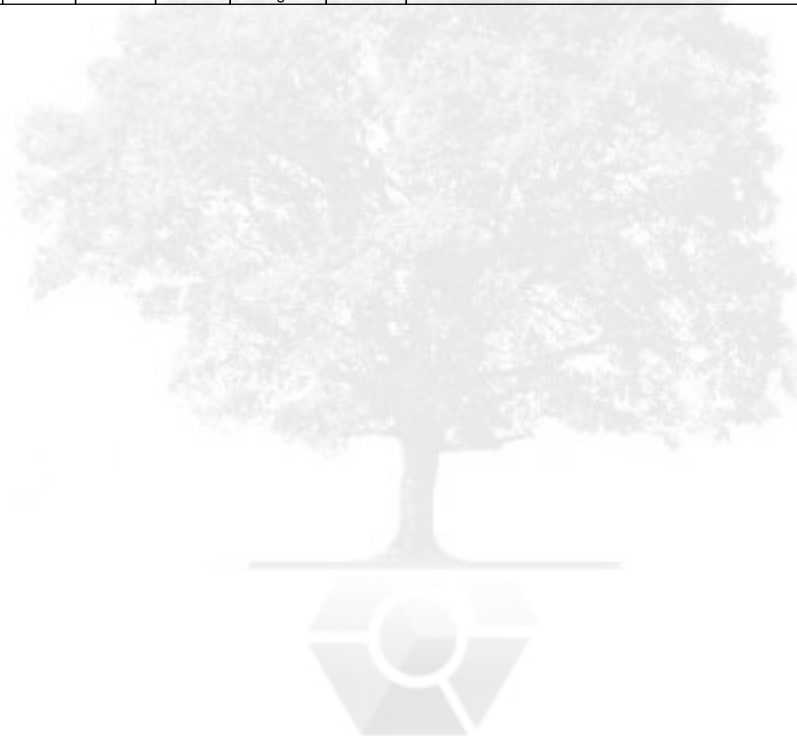
The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T85	Calc
T373	ICP/OES (Filtered)
T686	Discrete Analyser
T22	Titration
T11	IC
T303	ICP-OES (Total)
T6	ICP/OES

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	001-006
P (Dissolved)	T373	2:1-1	1	mg/l	N	001-006
P (Total)	T303	2:1-1	1	mg/l	N	001-006
Chloride	T686	2:1-1	1	mg/l	U	001-006
Sulphate	T11	2:1-1	0.05	mg/l	N	001-006
Calcium	T6	2:1-1	0.1	mg/l	N	001-006
Magnesium	T6	2:1-1	0.1	mg/l	N	001-006
Potassium	T6	2:1-1	0.1	mg/l	N	001-006
Sodium	T6	2:1-1	0.1	mg/l	N	001-006
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	001-006
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	N	001-006





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Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 749318-5

Date of Report: 19-Sep-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Customer Site Reference: A303 Stonehenge Phase 6 Ground
Investigation

Date Job Received at Concept: 04-Jul-2018

Date Analysis Started: 05-Jul-2018

Date Analysis Completed: 19-Sep-2018

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

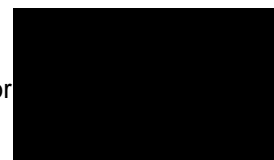
All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :
Zoe Gunter
Customer Service Advisor

Issued by :
Zoe Gunter
Customer Service Advisor



Concept Reference: 749318
 Project Site: A303 Stonehenge Phase 6 Ground Investigation
 Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
 Suite F.3

Concept Reference					749318 001	749318 002	749318 004	749318 006	749318 007
Customer Sample Reference					BH RZ 603	BH RZ 603 duplicate (leachate pH 6.2)	BH RZ 603	BH RZ 603 duplicate (leachate pH 6.2)	BH RZ 603
Top Depth					21.08	21.08	16.42	16.42	31.2
Bottom Depth									
Date Sampled					31-MAY-2018	31-MAY-2018	30-MAY-2018	30-MAY-2018	02-JUL-2018
Determinand	Method	Test Sample	LOD	Units					
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1	<1	<1	<1
P (Total)	T303	2:1-1	1	mg/l	<1	<1	<1	<1	<1
Chloride	T686	2:1-1	1	mg/l	4	5	2	2	2
Sulphate	T11	2:1-1	0.05	mg/l	3.0	1.8	7.6	7.4	4.2
Calcium	T6	2:1-1	0.1	mg/l	27	22	32	32	21
Magnesium	T6	2:1-1	0.1	mg/l	0.3	0.2	0.2	0.2	0.2
Potassium	T6	2:1-1	0.1	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
Sodium	T6	2:1-1	0.1	mg/l	1.7	1.5	0.7	0.7	1.1
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	2000	270	12000	6500	3800
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	1700	230	9800	5300	3200

Concept Reference: 749318
 Project Site: A303 Stonehenge Phase 6 Ground Investigation
 Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
 Suite F.3

Concept Reference					749318 008	749318 009	749318 010
Customer Sample Reference					BH RZ 603 duplicate (leachate pH 6.2)	BH R608	BH R608
Top Depth					31.2	10.75	10.6
Bottom Depth						10.85	11.05
Date Sampled					31-MAY-2018	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units			
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	0.5	0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1	<1
P (Total)	T303	2:1-1	1	mg/l	<1	<1	<1
Chloride	T686	2:1-1	1	mg/l	2	4	3
Sulphate	T11	2:1-1	0.05	mg/l	1.5	21	20
Calcium	T6	2:1-1	0.1	mg/l	19	26	26
Magnesium	T6	2:1-1	0.1	mg/l	0.3	0.3	0.3
Potassium	T6	2:1-1	0.1	mg/l	0.1	<0.1	<0.1
Sodium	T6	2:1-1	0.1	mg/l	0.9	1.1	1.0
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	4500	5100	6200
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	3700	40	30

Index to symbols used in 749318-5

Value	Description
2:1-1	Leachate to BS EN 12457-1 (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 for samples 009 and 010.

Method Index

Value	Description
T11	IC
T686	Discrete Analyser
T373	ICP/OES (Filtered)
T22	Titration
T303	ICP-OES (Total)
T6	ICP/OES
T85	Calc

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	001-002,004,006-010
P (Dissolved)	T373	2:1-1	1	mg/l	N	001-002,004,006-010
P (Total)	T303	2:1-1	1	mg/l	N	001-002,004,006-010
Chloride	T686	2:1-1	1	mg/l	U	001-002,004,006-010
Sulphate	T11	2:1-1	0.05	mg/l	N	001-002,004,006-010
Calcium	T6	2:1-1	0.1	mg/l	N	001-002,004,006-010
Magnesium	T6	2:1-1	0.1	mg/l	N	001-002,004,006-010
Potassium	T6	2:1-1	0.1	mg/l	N	001-002,004,006-010
Sodium	T6	2:1-1	0.1	mg/l	N	001-002,004,006-010
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	001-002,004,006-010
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	N	001-002,004,006-010





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Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 755463-3

Date of Report: 19-Sep-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Customer Site Reference: A303 Stonehenge Phase 6 Ground
Investigation

Date Job Received at Concept: 25-Jul-2018

Date Analysis Started: 30-Jul-2018

Date Analysis Completed: 19-Sep-2018

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

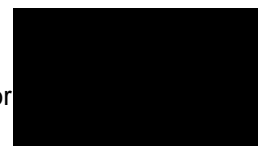
All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :
Zoe Gunter
Customer Service Advisor

Issued by :
Zoe Gunter
Customer Service Advisor



Concept Reference: 755463

Project Site: A303 Stonehenge Phase 6 Ground Investigation

Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
Suite F.3

Concept Reference		755463 004	755463 005	755463 008	755463 010			
Customer Sample Reference		BH R614	BH R614	BH R615	BH R616			
Depth		4.05	5.85	13.88	12.00			
Date Sampled		Deviating	Deviating	Deviating	Deviating			
AGS Type		D	D	D	D			
AGS Sample Reference		7	6	19	14			
Determinand	Method	Test Sample	LOD	Units				
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1	<1	<1
P (Total)	T303	2:1-1	1	mg/l	(NR)	(NR)	(NR)	(NR)
Chloride	T686	2:1-1	1	mg/l	1	2	6	3
Sulphate	T11	2:1-1	0.05	mg/l	3.8	5.1	7.0	4.8
Calcium	T6	2:1-1	0.1	mg/l	13	15	17	14
Magnesium	T6	2:1-1	0.1	mg/l	0.2	0.3	0.2	0.3
Potassium	T6	2:1-1	0.1	mg/l	0.1	<0.1	0.1	<0.1
Sodium	T6	2:1-1	0.1	mg/l	0.9	0.6	3.3	0.5
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	73	210	210	220
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	80	190	190	200

Index to symbols used in 755463-3

Value	Description
2:1-1	Leachate to BS EN 12457-1 (2:1)
NR	No Result
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
T85	Calc
T22	Titration
T373	ICP/OES (Filtered)
T303	ICP-OES (Total)
T6	ICP/OES
T11	IC
T686	Discrete Analyser

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	004-005,008,010
P (Dissolved)	T373	2:1-1	1	mg/l	N	004-005,008,010
P (Total)	T303	2:1-1	1	mg/l	N	004-005,008,010
Chloride	T686	2:1-1	1	mg/l	U	004-005,008,010
Sulphate	T11	2:1-1	0.05	mg/l	N	004-005,008,010
Calcium	T6	2:1-1	0.1	mg/l	N	004-005,008,010
Magnesium	T6	2:1-1	0.1	mg/l	N	004-005,008,010
Potassium	T6	2:1-1	0.1	mg/l	N	004-005,008,010
Sodium	T6	2:1-1	0.1	mg/l	N	004-005,008,010
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	004-005,008,010
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	N	004-005,008,010



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Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 757612-2

Date of Report: 19-Sep-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Customer Site Reference: A303 Stonehenge Phase 6 Ground
Investigation

Date Job Received at Concept: 31-Jul-2018

Date Analysis Started: 07-Aug-2018

Date Analysis Completed: 19-Sep-2018

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

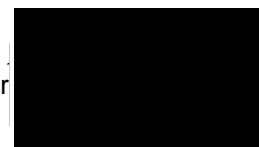
All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :
Zoe Gunter
Customer Service Advisor

Issued by :
Zoe Gunter
Customer Service Advisor



Concept Reference: 757612

Project Site: A303 Stonehenge Phase 6 Ground Investigation

Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
Suite F.3

Concept Reference					757612 001	757612 002	757612 003	757612 004	757612 005
Customer Sample Reference					BH R607 13.75 18 D	BH R607 16.56 22 D	BH R607 18.9 25 D	BH R607 13.75 18 D duplicate (leachate pH 6.2)	BH R607 18.9 25 D duplicate (leachate pH 6.2)
Depth					13.75	16.56	18.9	13.75	18.9
Date Sampled					Deviating	Deviating	Deviating	Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units					
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1	<1	<1	<1
P (Total)	T303	2:1-1	1	mg/l	<1	<1	<1	<1	<1
Chloride	T686	2:1-1	1	mg/l	1	2	3	2	3
Sulphate	T11	2:1-1	0.05	mg/l	14	11	3.8	12	4.1
Calcium	T6	2:1-1	0.1	mg/l	24	25	23	25	20
Magnesium	T6	2:1-1	0.1	mg/l	0.1	0.2	0.2	0.1	0.2
Potassium	T6	2:1-1	0.1	mg/l	<0.1	<0.1	<0.1	<0.1	<0.1
Sodium	T6	2:1-1	0.1	mg/l	0.4	0.3	0.5	0.6	0.8
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	73	130	110	37	61
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	80	130	110	50	70

Index to symbols used in 757612-2

Value	Description
2:1-1	Leachate to BS EN 12457-1 (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
T11	IC
T686	Discrete Analyser
T22	Titration
T85	Calc
T373	ICP/OES (Filtered)
T303	ICP-OES (Total)
T6	ICP/OES

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	001-005
P (Dissolved)	T373	2:1-1	1	mg/l	N	001-005
P (Total)	T303	2:1-1	1	mg/l	N	001-005
Chloride	T686	2:1-1	1	mg/l	U	001-005
Sulphate	T11	2:1-1	0.05	mg/l	N	001-005
Calcium	T6	2:1-1	0.1	mg/l	N	001-005
Magnesium	T6	2:1-1	0.1	mg/l	N	001-005
Potassium	T6	2:1-1	0.1	mg/l	N	001-005
Sodium	T6	2:1-1	0.1	mg/l	N	001-005
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	001-005
Alkalinity expressed as CaCO3	T22	2:1-1	10	mg/l	N	001-005



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Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 757633-1

Date of Report: 19-Sep-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Customer Site Reference: A303 Stonehenge Phase 6 Ground
Investigation

Date Job Received at Concept: 31-Jul-2018

Date Analysis Started: 07-Aug-2018

Date Analysis Completed: 19-Sep-2018

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

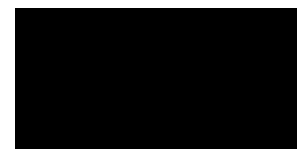
All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :
Zoe Gunter
Customer Service Advisor

Issued by :
Zoe Gunter
Customer Service Advisor



Concept Reference: 757633 Project Site: A303 STonehenge Phase 6 Ground Investigation Customer Reference: 733442 Leachate to BS EN 12457-1 (2:1) Analysed as Water Suite F.3					
Concept Reference					757633 001
Customer Sample Reference					BH R616 10.2 12 D
Top Depth					10.20
Depth					10.20
Date Sampled					Deviating
Determinand	Method	Test Sample	LOD	Units	
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1
P (Total)	T303	2:1-1	1	mg/l	<1
Chloride	T686	2:1-1	1	mg/l	3
Sulphate	T11	2:1-1	0.05	mg/l	2.8
Calcium	T6	2:1-1	0.1	mg/l	17
Magnesium	T6	2:1-1	0.1	mg/l	0.4
Potassium	T6	2:1-1	0.1	mg/l	<0.1
Sodium	T6	2:1-1	0.1	mg/l	<0.1
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	170
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	160

Index to symbols used in 757633-1

Value	Description
2:1-1	Leachate to BS EN 12457-1 (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
T6	ICP/OES
T373	ICP/OES (Filtered)
T11	IC
T85	Calc
T686	Discrete Analyser
T22	Titration
T303	ICP-OES (Total)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	001
P (Dissolved)	T373	2:1-1	1	mg/l	N	001
P (Total)	T303	2:1-1	1	mg/l	N	001
Chloride	T686	2:1-1	1	mg/l	U	001
Sulphate	T11	2:1-1	0.05	mg/l	N	001
Calcium	T6	2:1-1	0.1	mg/l	N	001
Magnesium	T6	2:1-1	0.1	mg/l	N	001
Potassium	T6	2:1-1	0.1	mg/l	N	001
Sodium	T6	2:1-1	0.1	mg/l	N	001
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	001
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	N	001



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Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 757642-2

Date of Report: 12-Sep-2018

Customer: Structural Soils Ltd
The Old School
Stillhouse Lane
Bedminster
Bristol
BS3 4EB

Customer Contact: Mr Michael Addinall

Customer Job Reference: 733442

Date Job Received at Concept: 31-Jul-2018

Date Analysis Started: 07-Aug-2018

Date Analysis Completed: 12-Sep-2018

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

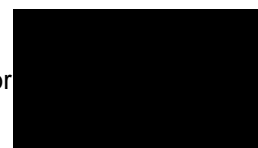
All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



1549

Report checked
and authorised by :
Chloe Kitto
Customer Service Advisor

Issued by :
Chloe Kitto
Customer Service Advisor



Concept Reference: 757642
 Customer Reference: 733442

Leachate to BS EN 12457-1 (2:1) Analysed as Water
 Suite F.3

Concept Reference		757642 002	757642 004			
Customer Sample Reference		BHR615 11.25 15 D	BHR615 11.25 15 D duplicate (leachate pH 6.2)			
Depth		11.25	11.25			
Date Sampled		Deviating	Deviating			
Determinand	Method	Test Sample	LOD	Units		
orthophosphate	T686	2:1-1	0.5	mg/l	<0.5	<0.5
P (Dissolved)	T373	2:1-1	1	mg/l	<1	<1
P (Total)	T303	2:1-1	1	mg/l	<1	<1
Chloride	T686	2:1-1	1	mg/l	6	5
Sulphate	T11	2:1-1	0.05	mg/l	19	16
Calcium	T6	2:1-1	0.1	mg/l	31	30
Magnesium	T6	2:1-1	0.1	mg/l	0.2	0.2
Potassium	T6	2:1-1	0.1	mg/l	<0.1	<0.1
Sodium	T6	2:1-1	0.1	mg/l	2.0	2.2
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	37	110
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	50	110

Index to symbols used in 757642-2

Value	Description
2:1-1	Leachate to BS EN 12457-1 (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
T11	IC
T373	ICP/OES (Filtered)
T22	Titration
T303	ICP-OES (Total)
T85	Calc
T686	Discrete Analyser
T6	ICP/OES

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
orthophosphate	T686	2:1-1	0.5	mg/l	N	002,004
P (Dissolved)	T373	2:1-1	1	mg/l	N	002,004
P (Total)	T303	2:1-1	1	mg/l	N	002,004
Chloride	T686	2:1-1	1	mg/l	U	002,004
Sulphate	T11	2:1-1	0.05	mg/l	N	002,004
Calcium	T6	2:1-1	0.1	mg/l	N	002,004
Magnesium	T6	2:1-1	0.1	mg/l	N	002,004
Potassium	T6	2:1-1	0.1	mg/l	N	002,004
Sodium	T6	2:1-1	0.1	mg/l	N	002,004
Alkalinity expressed as Bicarbonate	T85	2:1-1	10	mg/l	N	002,004
Alkalinity expressed as CaCO ₃	T22	2:1-1	10	mg/l	N	002,004



ANALYTICAL REPORT

Report Number	16630-18	F473	MICHAEL ADDINALL
Date Received	18-JUN-2018		STRUCTURAL SOILS LTD
Date Reported	05-JUL-2018		THE OLD SCHOOL HOUSE
Project	SOIL		STILLHOUSE LANE
Reference	733442		BEDMINSTER
Order Number			BRISTOL BS3 4EB

Laboratory Reference		SOIL391573	SOIL391574	SOIL391575						
Sample Reference		BHR602 15. 40-15.50	BHR602 20. 30-20.45	BHR602 25. 50-25.65						
Determinand	Unit	SOIL	SOIL	SOIL						
Dry Matter (Fresh)	%	81.3	79.9	79.0						
Neutralising Value as CaCO3 eq.	% w/w	77.9	91.3	70.1						
Neutralising Value as CaO eq.	% w/w	43.7	51.2	39.3						
Total Phosphorus	mg/kg	53098	16847	76585						
NAC Soluble Phosphorus	% w/w	<0.1	<0.1	<0.1						

Notes

Analysis Notes The sample submitted was of adequate size to complete all analysis requested.
 The results as reported relate only to the item(s) submitted for testing.
 The results are presented on a dry matter basis unless otherwise stipulated.

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Reported by *Joe Cherrie*
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 Coopers Bridge, Braziers Lane, Bracknell, Berkshire, RG42 6NS
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 Fax: 01344 890972
 email: enquiries@nrm.uk.com



ANALYTICAL REPORT

Report Number	20140-18	F473	MICHAEL ADDINALL	Client 733442
Date Received	18-JUL-2018		STRUCTURAL SOILS LTD	A303 STONEHENGE
Date Reported	06-AUG-2018		THE OLD SCHOOL HOUSE	PHASE 6
Project	SOIL		STILLHOUSE LANE	GROUND INVESTIGATION
Reference	733442		BEDMINSTER	
Order Number			BRISTOL BS3 4EB	

Laboratory Reference		SOIL395119	SOIL395120							
Sample Reference		BH R608 10.60-10.90	BH R608 10.71-10.90							
Determinand	Unit	SOIL	SOIL							
Dry Matter (Fresh)	%	85.3	79.5							
Neutralising Value as CaCO3 eq.	% w/w	97.4	97.5							
Neutralising Value as CaO eq.	% w/w	54.6	54.7							
Total Phosphorus	mg/kg	652	1004							
NAC Soluble Phosphorus	% w/w	<0.1	<0.1							

Notes

Analysis Notes The sample submitted was of adequate size to complete all analysis requested.
 The results as reported relate only to the item(s) submitted for testing.
 The results are presented on a dry matter basis unless otherwise stipulated.

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ANALYTICAL REPORT

Report Number	19545-18	F473	MICHAEL ADDINALL
Date Received	12-JUL-2018		STRUCTURAL SOILS LTD
Date Reported	06-AUG-2018		THE OLD SCHOOL HOUSE
Project	SOIL		STILLHOUSE LANE
Reference	733442		BEDMINSTER
Order Number			BRISTOL BS3 4EB

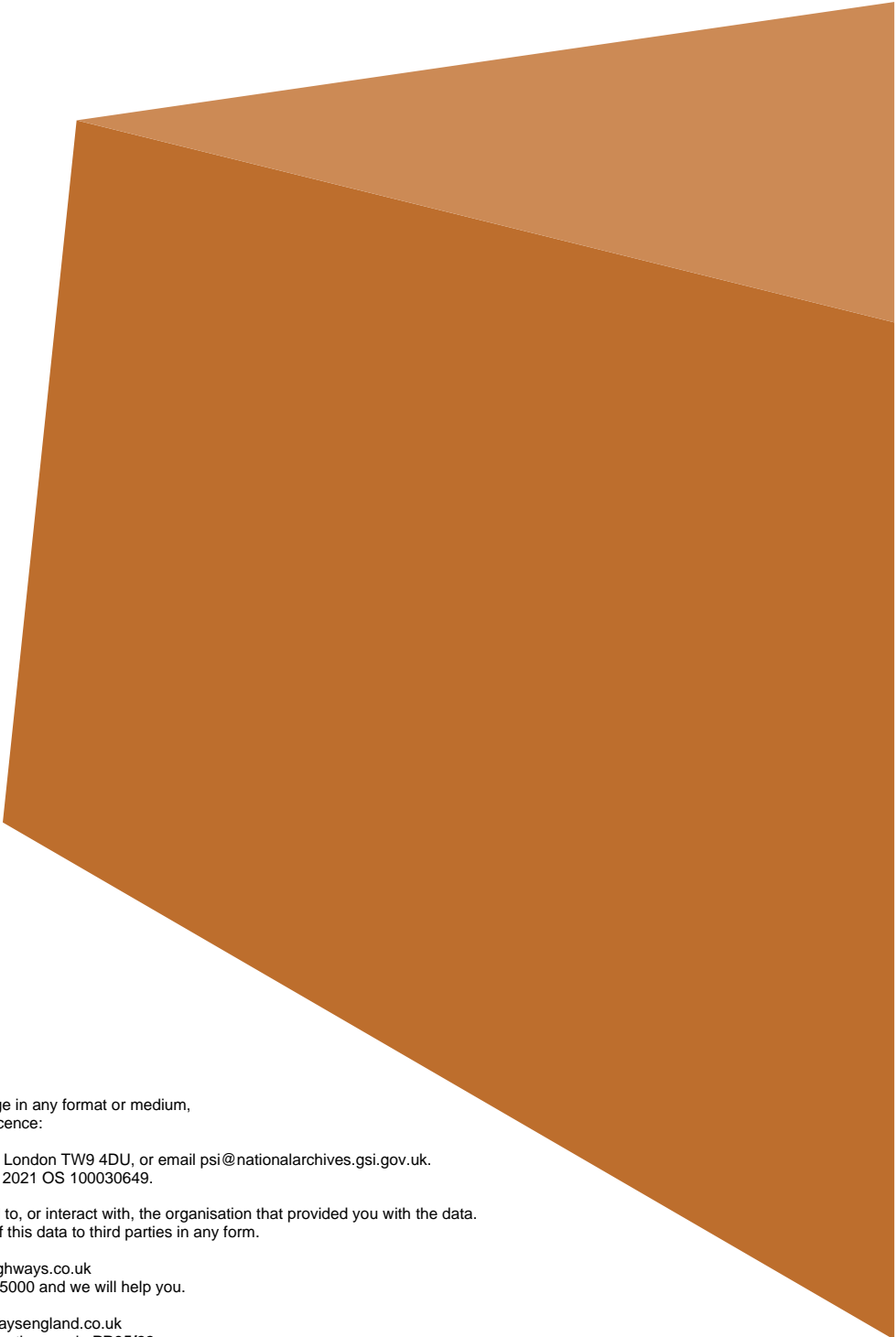
Laboratory Reference		SOIL394480								
Sample Reference		BHRZ 603 15.43-15.62								
Determinand	Unit	SOIL								
Dry Matter (Fresh)	%	79.5								
Neutralising Value as CaCO3 eq.	% w/w	71.4								
Neutralising Value as CaO eq.	% w/w	40.0								
Total Phosphorus	mg/kg	61078								
NAC Soluble Phosphorus	% w/w	<0.1								

Notes

Analysis Notes The sample submitted was of adequate size to complete all analysis requested.
 The results as reported relate only to the item(s) submitted for testing.
 The results are presented on a dry matter basis unless otherwise stipulated.

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