

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 20/00052
Issue Number: 1
Date: 22 January, 2020

Client: Churchill Enviro Ltd
1 Eyebrook Road
Bowdon
Cheshire
UK
WA14 3LR

Project Manager: Terry Annis
Project Name: St Johns Bulk Samples
Project Ref: Not specified
Order No: N/A
Date Samples Received: 07/01/20
Date Instructions Received: 07/01/20
Date Analysis Completed: 21/01/20

Prepared by:

Approved by:



Melanie Marshall
Laboratory Coordinator



Holly Neary-King
Client Manager

Envirolab Job Number:20/00052

Client Project Name: St Johns Bulk Samples

Client Project Ref: Not specified

Lab Sample ID	20/00052/1	20/00052/2	20/00052/3	20/00052/4	20/00052/5			Units	Method ref
Client Sample No									
Client Sample ID	SJ1	SJ2	SJ3	SJ4	SJ5				
Depth to Top									
Depth To Bottom									
Date Sampled									
Sample Type	Soil	Soil	Soil	Soil	Soil				
Sample Matrix Code	4A	4A	4A	4A	4A				
% Stones >10mm ^A	1.4	<0.1	2.1	3.6	0.9			% w/w	A-T-044
Arsenic _D ^{M#}	3	<1	<1	<1	<1			mg/kg	A-T-024s
Cadmium _D ^{M#}	0.8	0.6	<0.5	0.5	<0.5			mg/kg	A-T-024s
Copper _D ^{M#}	10	16	14	15	9			mg/kg	A-T-024s
Chromium _D ^{M#}	9	14	18	4	8			mg/kg	A-T-024s
Lead _D ^{M#}	19	29	36	18	3			mg/kg	A-T-024s
Mercury _D	<0.17	<0.17	<0.17	<0.17	<0.17			mg/kg	A-T-024s
Nickel _D ^{M#}	7	9	12	5	6			mg/kg	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1			mg/kg	A-T-024s
Zinc _D ^{M#}	19	25	18	23	8			mg/kg	A-T-024s

Envirolab Job Number:20/00052

Client Project Name: St Johns Bulk Samples

Client Project Ref: Not specified

Lab Sample ID	20/00052/1	20/00052/2	20/00052/3	20/00052/4	20/00052/5			Units	Method ref
Client Sample No	SJ1	SJ2	SJ3	SJ4	SJ5				
Client Sample ID									
Depth to Top									
Depth To Bottom									
Date Sampled									
Sample Type	Soil	Soil	Soil	Soil	Soil				
Sample Matrix Code	4A	4A	4A	4A	4A				
Asbestos in Soil (inc. matrix)									
Asbestos in Soil _A [#]	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos ACM – Suitable for Water Absorption Test?	N/A	N/A	N/A	N/A	N/A				

Envirolab Job Number:20/00052

Client Project Name: St Johns Bulk Samples

Client Project Ref: Not specified

Lab Sample ID	20/00052/1	20/00052/2	20/00052/3	20/00052/4	20/00052/5				Units	Method ref
Client Sample No										
Client Sample ID	SJ1	SJ2	SJ3	SJ4	SJ5					
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil	Soil					
Sample Matrix Code	4A	4A	4A	4A	4A					
PAH 16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-019s
Acenaphthylene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	<0.02	<0.02	<0.02				mg/kg	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.08	0.06	0.05	<0.04	<0.04				mg/kg	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.04	0.04	<0.04	0.05	0.04				mg/kg	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.07	<0.05	<0.05	0.08	<0.05				mg/kg	A-T-019s
Benzo(ghi)perylene _A ^{M#}	<0.05	<0.05	<0.05	<0.05	<0.05				mg/kg	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	<0.07	<0.07	<0.07				mg/kg	A-T-019s
Chrysene _A ^{M#}	0.08	0.06	0.07	<0.06	<0.06				mg/kg	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	<0.04	<0.04	<0.04				mg/kg	A-T-019s
Fluoranthene _A ^{M#}	0.13	0.1	0.09	<0.08	<0.08				mg/kg	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	<0.03	0.04	<0.03	0.03	0.03				mg/kg	A-T-019s
Naphthalene _A ^{M#}	<0.03	0.03	<0.03	0.05	<0.03				mg/kg	A-T-019s
Phenanthrene _A ^{M#}	0.06	0.03	0.04	<0.03	0.05				mg/kg	A-T-019s
Pyrene _A ^{M#}	0.15	0.09	0.11	0.14	<0.07				mg/kg	A-T-019s
PAH (total 16) _A ^{M#}	0.61	0.45	0.36	0.35	0.12				mg/kg	A-T-019s

Envirolab Job Number: 20/00052

Client Project Name: St Johns Bulk Samples

Client Project Ref: Not specified

Lab Sample ID	20/00052/1	20/00052/2	20/00052/3	20/00052/4	20/00052/5				Units	Method ref
Client Sample No										
Client Sample ID	SJ1	SJ2	SJ3	SJ4	SJ5					
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil	Soil					
Sample Matrix Code	4A	4A	4A	4A	4A					
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Ali >C8-C10 _A [#]	<1	<1	<1	<1	<1				mg/kg	A-T-022s
Ali >C10-C12 _A [#]	<1	<1	<1	<1	<1				mg/kg	A-T-023s
Ali >C12-C16 _A [#]	<1	<1	<1	<1	<1				mg/kg	A-T-023s
Ali >C16-C21 _A [#]	<1	2	<1	2	1				mg/kg	A-T-023s
Ali >C21-C35 _A [#]	7	6	8	5	2				mg/kg	A-T-023s
Total Aliphatics _A	7	8	8	7	3				mg/kg	A-T-022+23s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
Aro >C8-C9 _A [#]	<1	<1	<1	<1	<1				mg/kg	A-T-022s
Aro >C9-C10 _A [#]	<1	<1	<1	<1	<1				mg/kg	A-T-022s
Aro >C10-C12 _A [#]	3	2	<1	<1	<1				mg/kg	A-T-023s
Aro >C12-C16 _A [#]	<1	<1	<1	<1	1				mg/kg	A-T-023s
Aro >C16-C21 _A [#]	<1	<1	7	1	<1				mg/kg	A-T-023s
Aro >C21-C35 _A [#]	2	7	1	<1	<1				mg/kg	A-T-023s
Total Aromatics _A	5	9	8	1	1				mg/kg	A-T-022+23s
TPH (Ali & Aro) _A	12	17	16	8	4				mg/kg	A-T-022+23s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01				mg/kg	A-T-022s

REPORT NOTES

Notes - Soil chemical analysis

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

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis. For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

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

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts.

Superscript "M" indicates method accredited to MCERTS.

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.

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.

Asbestos in soil

Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if present as discrete fibres/fragments. 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 are not predominantly a SAND/LOAM/CLAY mix and are not covered by our BSEN 17025 or MCERTS accreditations.

Secondary Matrix Codes:

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

E = contains roots/twigs.

IS indicates Insufficient 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.

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.

Please contact us if you need any further information.

FINAL ANALYTICAL TEST REPORT SUPPLEMENT TO TEST REPORT 20/00845/1

Amendments: Request for Additional Analysis

Envirolab Job Number: 20/00845
Issue Number: 2

Date: 07 February, 2020

Client: Churchill Enviro Ltd
1 Eyebrook Road
Bowdon
Cheshire
UK
WA14 3LR

Project Manager: Terry Annis
Project Name: St. Johns
Project Ref: Not specified
Order No: N/A
Date Samples Received: 28/01/20
Date Instructions Received: 29/01/20
Date Analysis Completed: 07/02/20

Prepared by:


Melanie Marshall
Laboratory Coordinator

Approved by:


Holly Neary-King
Deputy Admin & Client Services Supervisor

Envirolab Job Number: 20/00845

Client Project Name: St. Johns

Client Project Ref: Not specified

Lab Sample ID	20/00845/1	20/00845/2	20/00845/3	20/00845/4				Units	Limit of Detection	Method ref
Client Sample No	SS1	SS2	SS3	SS4						
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil						
Sample Matrix Code	4A	4A	5A	4AE						
% Stones >10mm _A	13.3	4.4	36.0	19.2				% w/w	0.1	A-T-044
Arsenic _D ^{M#}	5	4	4	6				mg/kg	1	A-T-024s
Cadmium _D ^{M#}	2.5	1.1	1.2	2.7				mg/kg	0.5	A-T-024s
Copper _D ^{M#}	45	18	27	33				mg/kg	1	A-T-024s
Chromium _D ^{M#}	22	15	17	19				mg/kg	1	A-T-024s
Lead _D ^{M#}	109	69	91	99				mg/kg	1	A-T-024s
Mercury _D	0.54	0.29	0.29	0.51				mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	19	11	17	19				mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	1	<1				mg/kg	1	A-T-024s
Zinc _D ^{M#}	114	64	92	112				mg/kg	5	A-T-024s

Envirolab Job Number: 20/00845

Client Project Name: St. Johns

Client Project Ref: Not specified

Lab Sample ID	20/00845/1	20/00845/2	20/00845/3	20/00845/4				Units	Limit of Detection	Method ref
Client Sample No	SS1	SS2	SS3	SS4						
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil						
Sample Matrix Code	4A	4A	5A	4AE						
Asbestos in Soil (inc. matrix) ^										
Asbestos in soil [#]	NAD	NAD	NAD	NAD						A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A						A-T-045

Envirolab Job Number: 20/00845

Client Project Name: St. Johns

Client Project Ref: Not specified

Lab Sample ID	20/00845/1	20/00845/2	20/00845/3	20/00845/4				Units	Limit of Detection	Method ref
Client Sample No	SS1	SS2	SS3	SS4						
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil						
Sample Matrix Code	4A	4A	5A	4AE						
PAH-16MS										
Acenaphthene _A ^{M#}	0.58	0.53	0.44	0.99				mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.04	0.04	0.02	0.04				mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.84	0.65	0.70	1.38				mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	2.68	1.33	1.99	3.00				mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	2.47	0.96	1.82	2.35				mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	2.71	1.16	2.04	2.66				mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	1.23	0.46	0.90	1.17				mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.94	0.39	0.72	0.92				mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	2.63	1.38	1.99	2.80				mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.29	0.11	0.21	0.25				mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	5.94	3.35	4.95	7.43				mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.41	0.42	0.36	0.77				mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	1.49	0.56	1.00	1.38				mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.19	0.36	0.22	0.41				mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	3.41	2.86	2.75	5.36				mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	5.43	2.90	4.61	6.37				mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	31.3	17.5	24.7	37.3				mg/kg	0.01	A-T-019s

Envirolab Job Number: 20/00845

Client Project Name: St. Johns

Client Project Ref: Not specified

Lab Sample ID	20/00845/1	20/00845/2	20/00845/3	20/00845/4				Units	Limit of Detection	Method ref
Client Sample No	SS1	SS2	SS3	SS4						
Client Sample ID										
Depth to Top										
Depth To Bottom										
Date Sampled										
Sample Type	Soil	Soil	Soil	Soil						
Sample Matrix Code	4A	4A	5A	4AE						
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1				mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	3	4	2	4				mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	6	7	3	7				mg/kg	1	A-T-055s
Ali >C21-C35 _A	143	159	44	119				mg/kg	1	A-T-055s
Total Aliphatics _A	152	169	49	129				mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	4	7	4	4				mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	3	4	2	3				mg/kg	1	A-T-055s
Aro >C12-C16 _A	15	16	16	17				mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	69	48	63	103				mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	358	168	218	424				mg/kg	1	A-T-055s
Total Aromatics _A	448	243	304	550				mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	601	413	353	679				mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01				mg/kg	0.01	A-T-022s

REPORT NOTES

General

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

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

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.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Churchill Enviro Ltd, 1 Eyebrook Road, Bowdon, Cheshire, UK, WA14 3LR

Project No: 20/00845

Project: St. Johns

Date Received: 29/01/2020 (am)

Clients Project No:

Cool Box Temperatures (°C): 10.9

Lab Sample ID	20/00845/1	20/00845/2	20/00845/3	20/00845/4
Client Sample No	SS1	SS2	SS3	SS4
Client Sample ID/Depth				
Date Sampled				
Deviation Code				
B1 (no VPH)	✓	✓	✓	✓
D (no glass)	✓	✓	✓	✓
E (no date)	✓	✓	✓	✓

Key

B1 (no VPH) Separate container not supplied for VPH/BTEX analysis
D (no glass) Glass container not provided for extractable organics analysis
E (no date) No sampling date provided (all results affected if not provided)

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Our reference: 065330-CUR-00-XX-RP-GE-003-V01

21st February 2020

Mr Jack Overson
Lendlease Project Offices
Water Street
Manchester
M3 4JQ

Dear Jack,

Re: Letter Report for Bulk Excavation Works Soil Sampling

A - Introduction

Curtins Consulting were instructed by Lend Lease to undertake sampling of soils for waste classification purposes relating to the planned bulk excavation of approximately 5,000m³ material, on the Globe & Simpson Project at St Johns, M3 3GS.

An trial pit plan (Ref. 065330-CUR-00-XX-DR-GE-003-V01) is included in *Appendix A*, shows the extent of the intrusive investigation.

B – Intrusive Investigation (February 2020)

Scope of Works

A Curtins engineer attended site on 10 February 2020. The works comprised the advancement of 5 No. trial pits by Lend Lease to a maximum depth of 5.00m bgl. Four soils samples were obtained from each trial pit at depths of; 0.50m, 1.50m, 3.00m and 4.00m.

Each soil sample was tested for TPHs (aliphatic/aromatic), BTEX, PAHs, selected heavy metals and asbestos identification.

Summary of Ground Conditions

A summary of the ground conditions encountered during the site investigation works are presented in *Table 1.0*, with detailed information presented in the exploratory hole logs included in *Appendix B*.

Exploratory hole arisings were logged on site by a qualified Curtins Engineer. All exploratory holes were logged in accordance with the requirements of BS5930:2015 (British Standards Institution, 2015) including recording observed visual and olfactory indications of contamination.



Table 1.0 - Summary of encountered ground conditions:

Stratum	Depth to Top of Strata (m bgl)		Thickness (m)		Description
	Min	Max	Min	Max	
Made Ground	0.00		1.00 2.90		TP01, TP04 and TP05 Brown slightly sandy slightly clayey GRAVEL. Gravel is of mixed lithologies including brick, terracotta and concrete. <i>Overlying</i> Brown black slightly sandy slightly gravelly CLAY with intact bricks. Gravel is predominantly comprised of brick.
					TP02 and TP03 Asphalt underlain by granite paving blocks and concrete <i>Overlying</i> Red brown slightly gravelly SAND. Gravel comprised mixed lithologies including brick.
Superficial Deposits (Alluvium)	1.00	2.90	4.00	4.60*	Firm grey mottled orange slightly sandy CLAY Light brown sandy medium to coarse GRAVEL with frequent cobbles. Gravel is of mixed lithologies including sandstone.
Weathered Bedrock	4.00	4.60	0.40*	-*	Red brown fine to medium SAND. Rare subrounded fine to coarse gravel of sandstone.

*base not encountered

No groundwater was encountered during the investigation.

Soil Analysis

The following soils samples were obtained from the machine excavated trial pits to allow for chemical testing to be undertaken:

- 20 No. soil samples were scheduled for chemical testing, detailed in *Table 2.0*.

Soil samples were obtained from each trail pit at depths of; 0.50m, 1.50m, 3.00m and 4.00m.

Table 2.0 – Environmental Chemistry Analysis Suite: Soils

Suite Ref.	Analyte	LOD
Soils Suite A	Asbestos Screen, pH and Soil Organic Matter (SOM)	-
	Arsenic, Chromium, Chromium VI, Copper, Lead, Selenium, Zinc, Nickel	1 - 5 mg/kg
	Boron (water soluble)	1 mg/kg
	Cadmium	0.5 mg/kg
	Mercury	0.1 mg/kg
	Cyanide (total)	1 mg/kg
	Sulphate (water sol 2:1)	0.01 mg/kg
	Phenols (screen)	0.2 mg/kg
	PAHs (USEPA 16)	0.01 – 0.08 mg/kg



Suite Ref.	Analyte	LOD
	TPH (Aro/Ali Split)	0.01 to 0.1 mg/kg

All soil samples were placed in laboratory provided containers and stored in cool boxes prior to being transported to the nominated laboratory under the laboratory's chain of custody documentation. The laboratory selected by Curtins for chemical analysis was Envirolab (UKAS and MCERTS accredited).

Copies of the environmental chemistry testing certificates are presented in *Appendix C*.

Material Classification

Where any site soils are to be moved, disposed or recovered, guidance on the movement of contaminated soils is provided within the following document published by the Environment Agency, the Guidance on the classification and Assessment of Waste Technical Guidance WM3 (Environment Agency, 2015).

Guidance states that the principal contractor (or any other sub-contractor undertaking excavations) should, in conjunction with the proposed disposal facility, use where possible the relevant environmental chemistry analyses results to classify any surplus material identified for off-site disposal. However, it should be noted that this information is for guidance only and material identified for disposal should be tested and assessed in accordance with WM3 to enable classification during the works.

An initial assessment for the waste classification of the Made Ground and Natural soils encountered on site has been carried out through a comparison of the soil testing results against the Tier 1 Thresholds and using the Waste Soils Characterisation Assessment Tool, Cat-WasteSoil, developed by McArdle and Atkins. This online tool gives a rapid assessment of contaminated soils and their classification as either hazardous or non-hazardous (stable non-reactive hazardous waste) waste, it should be noted that this tool does not classify inert waste. Persistent Organic Pollutants (POP's) were not tested for as part of the investigation, however based on the Conceptual Site Model the risk of these being present on the site is considered low.

The initial assessment revealed that of the Made Ground and Natural Soils analysed, all samples have indicated to be non-hazardous with respect to Environment Agency waste classes, using the guidance in WM3.

The soil samples were screened for asbestos. No suspected asbestos containing materials (ACMs) were identified in the exploratory holes and the laboratory screening.

C - Conclusions

The assessment for the waste classification of the Made Ground and Natural soils on site have indicated the samples to be non-hazardous with respect to the Environment Agency Waste Classes.

Yours sincerely,

P Neesham
Geo-Environmental Engineer

For and on behalf of
Curtins Consulting Ltd



Appendices

Trial Pit Plan

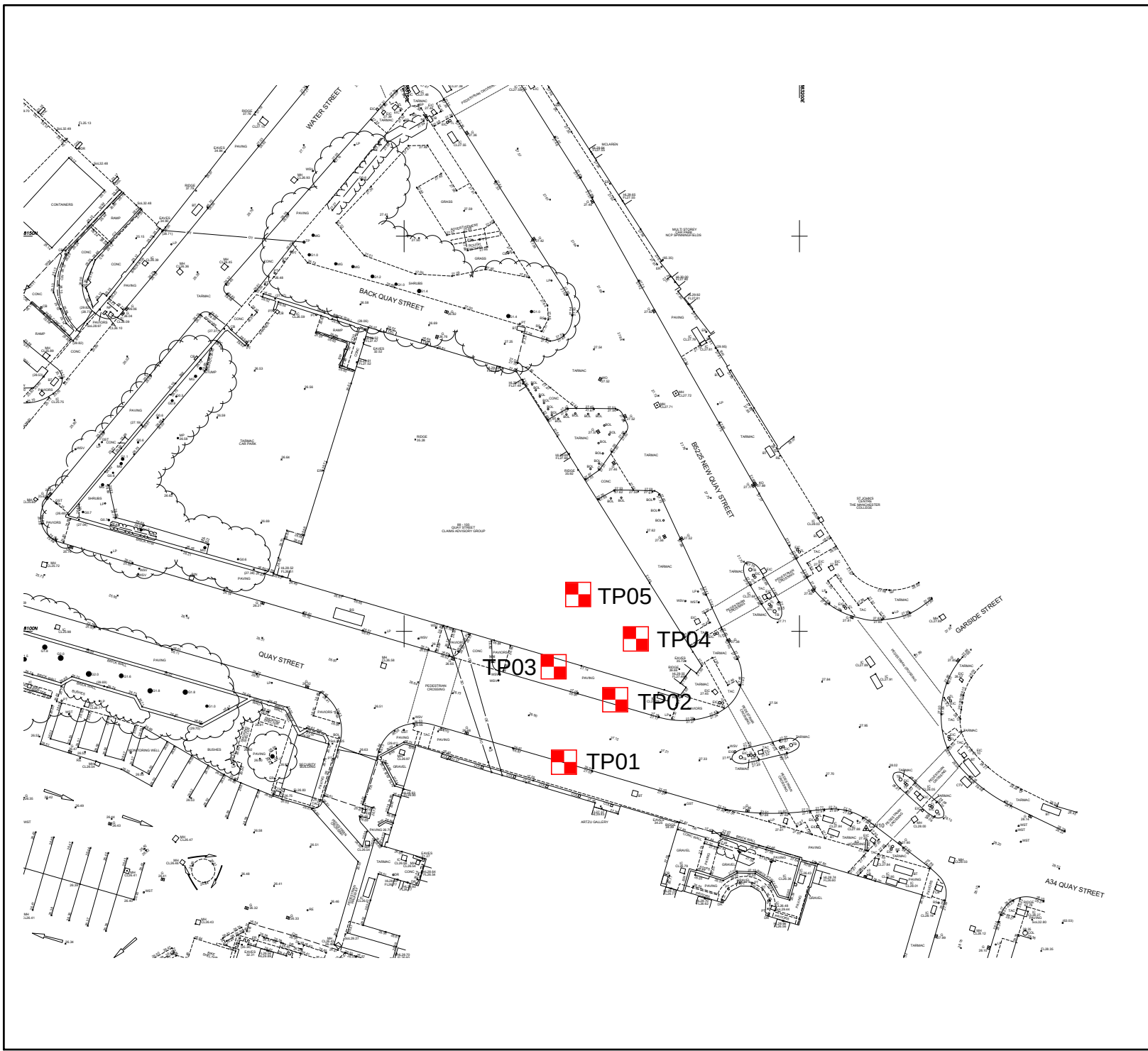
- Curtins drawing ref 065330-CUR-00-XX-DR-GE-003-V01_Trial Pit Plan

2020 Trial Pit Logs

- TP01 – TP05

2020 Contamination Test Results

- Envirolab, Certificate ref 20/01373



TRIAL PIT LOCATION

Rev:	Description:	Date:	By:	Chkd:
------	--------------	-------	-----	-------

Curtins Consulting Ltd,
 Merchant Exchange, 17-19 Whitworth Street West, Manchester, M1 5WG
 t: 0161 236 2394
 e: manchester@curtins.com
 www.curtins.com

Structures - Civils - Environmental - Infrastructure - Transport Planning - Sustainability - Expert Advisory Services
 Birmingham - Bristol - Cardiff - Douglas - Edinburgh - Kendal - Leeds - Liverpool - London - Manchester - Nottingham

INFORMATION				
Project: ST JOHNS BULK EXCAVATION				
Drg Title: TRIAL PIT LOCATION PLAN				
Scale:	Size:	First Issue:	Drawn:	Checked:
NTS	A3	20/02/2020	PN	JL
Drg No:				Rev:
065330-CUR-00-XX-DR-GE-003				V01

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Trial Pit Log

Trialpit No

TP01

Sheet 1 of 1

Project Name: St John Bulk Excavation Works

Project No.
065330.306Co-ords: -
Level:Date
10/02/2020

Location: Manchester

Dimensions
(m):

1.5

Client: Lendlease

Depth
5.00

m

Scale
1:50Logged
PN

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50	ES					MADE GROUND: Brown slightly sandy slightly clayey gravel. Sand is fine to coarse. Gravel is fine to coarse angular of mixed lithologies including brick and concrete.	1
	1.50	ES		1.20			MADE GROUND: Red brown sandy gravelly clay. Sand is fine to coarse. Gravel is fine to coarse angular to subrounded of mixed lithologies including wood and concrete.	2
	3.00	ES		2.90			Light brown sandy medium to coarse GRAVEL with frequent cobbles. Sand is medium to coarse. Gravel is fine to coarse subrounded to rounded including sandstone.	3
	4.00	ES		4.00			Red brown fine to medium SAND. Rare subrounded gravel of sandstone. (Possible weathered sandstone)	4
				5.00			End of pit at 5.00 m	5
								6
								7
								8
								9
								10

Remarks: Machine excavated. No groundwater encountered during excavation.

Stability: Pit remained stable and open throughout.





Trial Pit Log

Trialpit No

TP02

Sheet 1 of 1

Project Name: St John Bulk Excavation Works

Project No.
065330.306Co-ords: -
Level:Date
10/02/2020

Location: Manchester

Dimensions
(m):

1.5

Client: Lendlease

Depth
5.00

m

Scale
1:50Logged
PN

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.05			MADE GROUND: Red brown slightly sandy clay. Sand is fine to medium.	
				0.40			ASPHALT underlain by granite paving blocks.	
	0.50	ES		0.45			CONCRETE	
							MADE GROUND: Red brown slightly gravelly medium to coarse sand. Gravel is fine to coarse angular to subrounded of mixed lithologies including brick.	1
				1.00			Firm grey mottled orange slightly sandy CLAY.	
	1.50	ES						2
				2.40				
							Light brown sandy medium to coarse GRAVEL with frequent cobbles. Sand is medium to coarse. Gravel is subrounded to rounded of mixed lithologies including sandstone.	3
	3.00	ES						
								4
	4.00	ES						
				4.60				
				5.00			Red brown fine to medium SAND. Rare subrounded gravel of sandstone. (Possible weathered sandstone)	5
							End of pit at 5.00 m	
								6
								7
								8
								9
								10

Remarks: Machine excavated. No groundwater encountered during excavation.

Stability: Pit remained stable and open throughout.





Trial Pit Log

Trialpit No

TP03

Sheet 1 of 1

Project Name: St John Bulk Excavation Works

Project No.
065330.306Co-ords: -
Level:Date
10/02/2020

Location: Manchester

Dimensions
(m):

1

Client: Lendlease

Depth
4.40

2.5

Scale
1:50Logged
PN

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.05			ASPHALT	
				0.35			MADE GROUND: Granite paving blocks	
	0.50	ES					MADE GROUND: Red brown slightly gravelly medium to coarse sand. Gravel is fine to coarse angular to subrounded of mixed lithologies including brick.	1
				1.10			Firm grey mottled orange slightly sandy CLAY.	
	1.50	ES		1.50			Light brown sandy medium to coarse GRAVEL with frequent cobbles. Sand is medium to coarse. Gravel is subrounded to rounded of mixed lithologies including sandstone.	2
	3.00	ES						3
	4.00	ES						4
				4.40			End of pit at 4.40 m	5
								6
								7
								8
								9
								10

Remarks: Machine excavated. No groundwater encountered during excavation.

Stability: Pit terminated at 4.40m due to instability of the sides.





Trial Pit Log

Trialpit No

TP04

Sheet 1 of 1

Project Name: St John Bulk Excavation Works

Project No.
065330.306Co-ords: -
Level:Date
10/02/2020

Location: Manchester

Dimensions
(m):

1

Client: Lendlease

Depth
4.50

2.5

Scale
1:50Logged
PN

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50	ES		0.50			MADE GROUND: Brown slightly sandy fine to coarse gravel with frequent cobbles and intact bricks. Sand is fine to medium. Gravel is subangular to subrounded of mixed lithologies including brick, concrete and terracotta. Cobbles are angular of brick.	1
	1.50	ES					MADE GROUND: Brown black slightly sandy slightly gravelly clay with intact bricks. Sand is medium to coarse. Gravel is fine to coarse angular to subangular including brick.	2
	3.00	ES		2.70			Light brown sandy medium to coarse GRAVEL with frequent cobbles. Sand is medium to coarse angular to subrounded of mixed lithologies including sandstone.	3
	4.00	ES		4.50				4
							End of pit at 4.50 m	5
								6
								7
								8
								9
								10

Remarks: Machine excavated. No groundwater encountered during excavation.

Stability: Pit terminated at 4.50m due to instability of the sides.





Trial Pit Log

Trialpit No

TP05

Sheet 1 of 1

Project Name: St John Bulk Excavation Works

Project No.
065330.306Co-ords: -
Level:Date
10/02/2020

Location: Manchester

Dimensions
(m):

1

Depth
4.20

2.5

Scale
1:50Logged
PN

Client: Lendlease

Water Strike	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.50	ES		0.30			MADE GROUND: Light grey slightly sandy gravel. Sand is medium to coarse. Gravel is medium to coarse angular to subangular of limestone.	
	1.50	ES					MADE GROUND: Brown black slightly sandy slightly gravelly clay with intact bricks. Sand is medium to coarse. Gravel is fine to coarse angular to subangular including brick.	1
				2.00				2
	3.00	ES					Orange brown slightly sandy fine to coarse GRAVEL. Sand is medium to coarse. Gravel is subrounded to rounded of mixed lithologies including sandstone.	3
	4.00	ES		4.20				4
							End of pit at 4.20 m	5
								6
								7
								8
								9
								10

Remarks: Machine excavated. No groundwater encountered during excavation.

Stability: Pit terminated at 4.20m bgl to due instability of the sides.



FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 20/01373
Issue Number: 1
Date: 18 February, 2020

Client: Curtins Consulting (Manchester)
Merchant Exchange
17-19 Whitworth Street
Manchester
UK
M1 5WG

Project Manager: Philippa Neesham
Project Name: St. Johns Bulk Excavation
Project Ref: 065330.306
Order No: EBMA2270
Date Samples Received: 11/02/20
Date Instructions Received: 12/02/20
Date Analysis Completed: 18/02/20

Prepared by:



Melanie Marshall
Laboratory Coordinator

Approved by:



Danielle Brierley
Client Manager

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/1	20/01373/2	20/01373/3	20/01373/4	20/01373/5	20/01373/6	20/01373/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP01	TP01	TP02	TP02	TP02			
Depth to Top	0.50	1.50	3.00	4.00	0.50	1.50	3.00			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5AB	4A	4A	4A	4AB	4A	4AB			
% Stones >10mm _A	38.8	31.7	59.6	28.3	57.7	11.7	20.1	% w/w	0.1	A-T-044
pH _D ^{M#}	10.36	9.95	8.88	8.62	8.96	8.18	7.40	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.23	0.13	0.02	0.03	<0.01	0.04	0.03	g/l	0.01	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Organic matter _D ^{M#}	1.0	1.1	0.1	0.5	0.5	0.5	1.4	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	4	3	<1	2	3	<1	3	mg/kg	1	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	12	23	3	4	11	6	7	mg/kg	1	A-T-024s
Chromium _D ^{M#}	8	10	6	6	4	12	10	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	32	41	3	30	73	11	14	mg/kg	1	A-T-024s
Mercury _D	0.30	0.25	<0.17	<0.17	<0.17	<0.17	<0.17	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	7	8	7	6	6	11	11	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	29	36	17	20	12	19	26	mg/kg	5	A-T-024s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/1	20/01373/2	20/01373/3	20/01373/4	20/01373/5	20/01373/6	20/01373/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP01	TP01	TP02	TP02	TP02			
Depth to Top	0.50	1.50	3.00	4.00	0.50	1.50	3.00			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5AB	4A	4A	4A	4AB	4A	4AB			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/1	20/01373/2	20/01373/3	20/01373/4	20/01373/5	20/01373/6	20/01373/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP01	TP01	TP02	TP02	TP02			
Depth to Top	0.50	1.50	3.00	4.00	0.50	1.50	3.00			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5AB	4A	4A	4A	4AB	4A	4AB			
PAH-16MS										
Acenaphthene _A ^{M#}	0.27	0.14	<0.01	0.03	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.38	0.21	<0.02	0.04	<0.02	<0.02	<0.02	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.59	1.34	<0.04	0.18	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.43	1.10	<0.04	0.18	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.44	1.22	<0.05	0.19	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.24	0.65	<0.05	0.12	<0.05	<0.05	<0.05	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.18	0.45	<0.07	0.08	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.61	1.26	<0.06	0.20	<0.06	<0.06	<0.06	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.05	0.14	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.57	1.81	<0.08	0.32	<0.08	<0.08	<0.08	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.24	0.10	<0.01	0.02	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.28	0.77	<0.03	0.13	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.08	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	1.51	0.61	<0.03	0.16	<0.03	<0.03	<0.03	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	1.49	3.01	<0.07	0.35	<0.07	<0.07	<0.07	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	8.37	12.9	<0.08	2.00	<0.08	<0.08	<0.08	mg/kg	0.01	A-T-019s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/1	20/01373/2	20/01373/3	20/01373/4	20/01373/5	20/01373/6	20/01373/7	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP01	TP01	TP01	TP01	TP02	TP02	TP02			
Depth to Top	0.50	1.50	3.00	4.00	0.50	1.50	3.00			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	5AB	4A	4A	4A	4AB	4A	4AB			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	2	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	3	9	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	4	11	<1	<1	<1	<1	<1	mg/kg	1	A-T-055s
Ali >C21-C35 _A	18	75	<1	4	<1	<1	<1	mg/kg	1	A-T-055s
Total Aliphatics _A	26	98	<1	4	1	<1	<1	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	3	5	<1	<1	1	<1	<1	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	1	4	<1	<1	1	<1	<1	mg/kg	1	A-T-055s
Aro >C12-C16 _A	5	39	<1	2	5	<1	<1	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	9	126	<1	3	13	<1	<1	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	23	374	3	9	20	<1	<1	mg/kg	1	A-T-055s
Total Aromatics _A	42	547	3	15	41	<1	<1	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	68	645	4	19	42	<1	<1	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/8	20/01373/9	20/01373/10	20/01373/11	20/01373/12	20/01373/13	20/01373/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP02	TP03	TP03	TP03	TP03	TP04	TP04			
Depth to Top	4.00	0.50	1.50	3.00	4.00	0.50	1.50			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4A	4A	4AB	4AB			
% Stones >10mm _A	50.6	26.0	8.3	54.2	6.6	30.8	22.2	% w/w	0.1	A-T-044
pH _D ^{M#}	8.88	9.76	9.29	9.06	8.94	7.98	8.23	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.02	0.09	0.06	0.03	0.04	0.24	0.28	g/l	0.01	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	5	<1	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	0.2	A-T-050s
Organic matter _D ^{M#}	0.4	6.1	2.7	0.5	0.8	10.9	4.9	% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	1	6	5	<1	2	29	16	mg/kg	1	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	1.1	mg/kg	1	A-T-027s
Cadmium _D ^{M#}	<0.5	1.2	0.7	<0.5	<0.5	1.4	0.9	mg/kg	0.5	A-T-024s
Copper _D ^{M#}	6	38	18	5	12	133	47	mg/kg	1	A-T-024s
Chromium _D ^{M#}	6	10	10	6	12	19	16	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-040s
Lead _D ^{M#}	12	67	31	8	15	419	345	mg/kg	1	A-T-024s
Mercury _D	<0.17	0.32	<0.17	<0.17	<0.17	4.93	1.58	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	7	16	13	5	12	28	17	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1	<1	mg/kg	1	A-T-024s
Zinc _D ^{M#}	18	80	53	16	37	378	170	mg/kg	5	A-T-024s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/8	20/01373/9	20/01373/10	20/01373/11	20/01373/12	20/01373/13	20/01373/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP02	TP03	TP03	TP03	TP03	TP04	TP04			
Depth to Top	4.00	0.50	1.50	3.00	4.00	0.50	1.50			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4A	4A	4AB	4AB			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD	NAD			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A	N/A			A-T-045

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/8	20/01373/9	20/01373/10	20/01373/11	20/01373/12	20/01373/13	20/01373/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP02	TP03	TP03	TP03	TP03	TP04	TP04			
Depth to Top	4.00	0.50	1.50	3.00	4.00	0.50	1.50			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4A	4A	4AB	4AB			
PAH-16MS										
Acenaphthene _A ^{M#}	0.25	3.56	1.74	0.82	1.56	2.65	0.83	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.02	0.13	<0.01	0.01	0.02	0.50	0.14	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.28	2.96	1.55	0.78	1.05	3.78	1.22	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.53	7.33	2.22	1.38	1.72	8.01	3.46	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.46	7.87	1.49	1.10	1.31	6.17	2.52	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.49	9.46	1.70	1.26	1.51	6.87	2.56	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.24	4.83	0.73	0.55	0.71	2.75	1.19	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.19	3.54	0.66	0.42	0.55	2.64	0.91	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.57	9.79	2.07	1.34	1.69	10.9	3.20	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.05	1.05	0.19	0.13	0.17	0.66	0.32	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	1.27	17.6	6.56	4.00	5.20	20.8	8.03	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.23	1.92	1.16	0.59	0.97	2.07	0.64	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.25	4.99	0.96	0.68	0.87	2.87	1.42	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.08	0.69	0.43	0.31	0.63	1.06	0.35	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	1.29	14.4	6.37	3.57	4.64	26.1	6.68	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	1.25	16.1	5.19	3.41	4.12	22.6	7.93	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	7.45	106	33	20.4	26.7	120	41.4	mg/kg	0.01	A-T-019s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/8	20/01373/9	20/01373/10	20/01373/11	20/01373/12	20/01373/13	20/01373/14	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP02	TP03	TP03	TP03	TP03	TP04	TP04			
Depth to Top	4.00	0.50	1.50	3.00	4.00	0.50	1.50			
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20			
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES			
Sample Matrix Code	4AB	4AB	4AB	4A	4A	4AB	4AB			
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1	3	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1	3	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	12	<1	1	4	10	<1	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	17	1	1	7	11	2	mg/kg	1	A-T-055s
Ali >C21-C35 _A	3	48	4	6	17	43	10	mg/kg	1	A-T-055s
Total Aliphatics _A	3	77	5	9	28	64	18	mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	1	7	2	<1	2	5	119	mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	13	1	4	9	16	273	mg/kg	1	A-T-055s
Aro >C12-C16 _A	5	146	10	23	80	136	13	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	14	500	27	56	213	491	42	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	30	1100	57	106	366	1130	98	mg/kg	1	A-T-055s
Total Aromatics _A	50	1770	96	189	670	1780	544	mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	54	1840	101	198	699	1840	562	mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/kg	0.01	A-T-022s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/15	20/01373/16	20/01373/17	20/01373/18	20/01373/19	20/01373/20		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP04	TP05	TP05	TP05	TP05				
Depth to Top	3.00	4.00	0.50	1.50	3.00	4.00				
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AB	4AB	6A	6ABE	4A	4A				
% Stones >10mm _A	25.6	26.7	14.9	8.2	27.1	44.4		% w/w	0.1	A-T-044
pH _D ^{M#}	8.08	8.23	9.11	8.15	7.86	8.02		pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.21	0.11	0.48	1.39	0.26	0.61		g/l	0.01	A-T-026s
Cyanide (total) _A ^{M#}	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		mg/kg	0.2	A-T-050s
Organic matter _D ^{M#}	0.7	0.6	2.7	4.7	0.4	0.7		% w/w	0.1	A-T-032 OM
Arsenic _D ^{M#}	9	7	7	17	4	4		mg/kg	1	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	1.2	1.5	<1.0	<1.0		mg/kg	1	A-T-027s
Cadmium _D ^{M#}	0.7	0.7	0.8	0.6	0.9	0.6		mg/kg	0.5	A-T-024s
Copper _D ^{M#}	25	16	83	48	5	10		mg/kg	1	A-T-024s
Chromium _D ^{M#}	11	11	13	15	9	8		mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-040s
Lead _D ^{M#}	232	73	192	399	16	35		mg/kg	1	A-T-024s
Mercury _D	0.65	<0.17	0.72	0.67	<0.17	<0.17		mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	15	16	14	17	19	13		mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-024s
Zinc _D ^{M#}	59	56	86	99	34	34		mg/kg	5	A-T-024s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/15	20/01373/16	20/01373/17	20/01373/18	20/01373/19	20/01373/20		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP04	TP05	TP05	TP05	TP05				
Depth to Top	3.00	4.00	0.50	1.50	3.00	4.00				
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AB	4AB	6A	6ABE	4A	4A				
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	NAD	NAD	NAD	NAD				A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	N/A	N/A	N/A	N/A				A-T-045

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/15	20/01373/16	20/01373/17	20/01373/18	20/01373/19	20/01373/20		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP04	TP05	TP05	TP05	TP05				
Depth to Top	3.00	4.00	0.50	1.50	3.00	4.00				
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AB	4AB	6A	6ABE	4A	4A				
PAH-16MS										
Acenaphthene _A ^{M#}	0.02	<0.01	0.48	0.32	<0.01	0.04		mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.02	<0.01	0.08	0.09	<0.01	0.01		mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	0.06	0.02	0.72	0.60	<0.02	0.09		mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.17	0.09	1.97	1.62	<0.04	0.22		mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.12	0.08	1.59	1.21	<0.04	0.17		mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.12	0.10	1.82	1.23	<0.05	0.19		mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.07	<0.05	0.92	0.68	<0.05	0.10		mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	<0.07	<0.07	0.65	0.42	<0.07	0.07		mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.17	0.10	2.08	1.64	<0.06	0.25		mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	<0.04	<0.04	0.25	0.17	<0.04	<0.04		mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.33	0.17	4.07	3.43	<0.08	0.46		mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	0.03	<0.01	0.37	0.31	<0.01	0.04		mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.07	0.06	1.11	0.77	<0.03	0.10		mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	<0.03	<0.03	0.25	0.25	<0.03	0.03		mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.21	0.10	3.37	2.95	<0.03	0.43		mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.36	0.18	4.21	3.49	<0.07	0.48		mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	1.75	0.90	23.9	19.2	<0.08	2.68		mg/kg	0.01	A-T-019s

Envirolab Job Number: 20/01373

Client Project Name: St. Johns Bulk Excavation

Client Project Ref: 065330.306

Lab Sample ID	20/01373/15	20/01373/16	20/01373/17	20/01373/18	20/01373/19	20/01373/20		Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	TP04	TP04	TP05	TP05	TP05	TP05				
Depth to Top	3.00	4.00	0.50	1.50	3.00	4.00				
Depth To Bottom										
Date Sampled	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20	10-Feb-20				
Sample Type	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES	Soil - ES				
Sample Matrix Code	4AB	4AB	6A	6ABE	4A	4A				
TPH CWG										
Ali >C5-C6 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C6-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	<1	<1	<1	<1		mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	<1	1	<1	<1		mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	2	3	<1	<1		mg/kg	1	A-T-055s
Ali >C21-C35 _A	<1	2	22	12	<1	2		mg/kg	1	A-T-055s
Total Aliphatics _A	<1	2	26	16	<1	2		mg/kg	1	A-T-055s
Aro >C5-C7 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	2	2	3	2	<1	1		mg/kg	1	A-T-055s
Aro >C10-C12 _A ^{M#}	<1	2	3	2	<1	<1		mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	2	8	13	<1	3		mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	2	4	30	56	<1	10		mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	6	11	71	124	<1	22		mg/kg	1	A-T-055s
Total Aromatics _A	12	22	113	197	<1	36		mg/kg	1	A-T-055s
TPH (Ali & Aro >C5-C35) _A	13	23	139	213	<1	39		mg/kg	1	A-T-055s
BTEX - Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		mg/kg	0.01	A-T-022s

REPORT NOTES

General

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

The results reported herein relate only to the material supplied to the laboratory.

The residue of any samples contained within this report, and any received with the same delivery, will be disposed of six weeks after initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of six months after the initial Asbestos testing is completed.

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.

The Client Sample No, Client Sample ID, Depth to Top, Depth to Bottom and Date Sampled were all provided by the client.

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.

Envirolab Deviating Samples Report

Units 7&8 Sandpits Business Park, Mottram Road, Hyde, SK14 3AR
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client:	Curtins Consulting (Manchester), Merchant Exchange, 17-19 Whitworth Street , Manchester, UK, M1 5WG	Project No:	20/01373
Project:	St. Johns Bulk Excavation	Date Received:	12/02/2020 (am)
Clients Project No:	065330.306	Cool Box Temperatures (°C):	7.6 -8.3

NO DEVIATIONS IDENTIFIED

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.