

Low Flow Monitoring & Sampling Test Report

Location:	RB103	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	14/03/2022	Operator:	Paul Brennan

Level Measurements taken to:	Top of cover.		
Depth to water (m):	3.32	Total depth (m):	7.42
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.12
Approximate tube position (m):	3.8	Screen depth (mbgl):	2-10
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-3.32	Total depth (mAOD)	-7.42

Estimated volume pumped (Ltrs):	17	Flow Rate (ml/min)	410-430
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
13:05	7.17	10.7	2345.5	48.6	418	3.40	-
13:10	7.17	11.0	2366.0	10.0	274	3.46	-
13:15	7.16	10.9	2335.8	10.5	254	3.48	-
13:20	7.15	11.0	2317.6	10.1	245	3.49	-
13:25	7.14	11.0	2337.7	8.7	250	3.49	-
13:30	7.14	11.1	2348.1	7.9	252	3.49	-
13:35	7.13	11.1	2376.7	7.0	253	3.49	-
13:40	7.12	11.2	2386.5	5.4	255	3.50	-
13:45	7.11	11.3	2393.2	4.8	252	3.50	-

Sample Description:

Clear, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Installation inside demolition area and could only be done 14/3/22.

Laboratory Job Number:

Unknown.



Low Flow Monitoring & Sampling Test Report

Location:	RB104	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	14/03/2022	Operator:	Paul Brennan

Level Measurements taken to:		Top of cover.	
Depth to water (m):	2.12	Total depth (m):	5.62
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.10
Approximate tube position (m):	2.6	Screen depth (mbgl):	2-10
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-2.12	Total depth (mAOD)	-5.62

Estimated volume pumped (Ltrs):	20	Flow Rate (ml/min)	470-500
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
14:22	7.10	10.3	1266.7	9.7	476	2.24	-
14:27	7.12	10.5	1263.0	3.0	308	2.36	-
14:32	7.11	10.6	1250.1	2.5	265	2.43	-
14:37	7.13	10.7	1230.1	3.1	241	2.48	-
14:42	7.14	10.7	1207.1	4.5	239	2.53	-
14:47	7.13	10.7	1202.7	6.0	231	2.54	-
14:52	7.13	10.7	1186.3	8.2	236	2.56	-
14:57	7.14	10.8	1153.2	8.7	229	2.58	-
15:02	7.15	10.8	1135.7	10.0	235	2.58	-

Sample Description:

Pale brown, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Soft bottom.

Laboratory Job Number:

Unknown.



Low Flow Monitoring & Sampling Test Report

Location:	RB105	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	15/03/2022	Operator:	Paul Brennan

Level Measurements taken to:		Top of cover.	
Depth to water (m):	2.17	Total depth (m):	5.55
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.25
Approximate tube position (m):	2.7	Screen depth (mbgl):	2-10
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-2.17	Total depth (mAOD)	-5.55

Estimated volume pumped (Ltrs):	15	Flow Rate (ml/min)	470-480
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
07:56	7.34	9.8	381.3	48.4	402	2.27	-
08:01	7.39	10.5	376.5	44.4	237	2.33	-
08:06	7.39	10.5	376.6	44.0	198	2.36	-
08:11	7.41	10.6	376.7	44.9	186	2.39	-
08:16	7.43	10.7	375.1	43.8	176	2.39	-
08:21	7.44	10.7	375.4	43.4	178	2.40	-
08:26	7.45	10.7	376.2	42.7	181	2.40	-

Sample Description:

Clear, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Laboratory Job Number:

Unknown.



Low Flow Monitoring & Sampling Test Report

Location:	RB106	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	14/03/2022	Operator:	Paul Brennan

Level Measurements taken to:	Top of cover.		
Depth to water (m):	2.10	Total depth (m):	4.90
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.14
Approximate tube position (m):	2.6	Screen depth (mbgl):	2-10
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-2.10	Total depth (mAOD)	-4.90

Estimated volume pumped (Ltrs):	24	Flow Rate (ml/min)	630-650
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
15:36	7.18	10.2	951.2	67.9	406	2.21	-
15:41	7.18	10.3	1060.7	64.7	269	2.26	-
15:46	7.18	10.4	1130.6	64.5	250	2.29	-
15:51	7.17	10.4	1161.3	64.7	235	2.30	-
15:56	7.19	10.5	1194.9	64.6	234	2.30	-
16:01	7.17	10.5	1221.4	64.7	235	2.30	-
16:06	7.17	10.5	1250.5	64.6	228	2.30	-
16:11	7.16	10.5	1264.7	64.3	232	2.31	-
16:16	7.16	10.5	1278.0	64.0	226	2.32	-

Sample Description:

Clear, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Soft bottom.

Laboratory Job Number:

Unknown.



Low Flow Monitoring & Sampling Test Report

Location:	WS09A	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	15/03/2022	Operator:	Paul Brennan

Level Measurements taken to:	Top of cover.		
Depth to water (m):	3.41	Total depth (m):	3.71
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.17
Approximate tube position (m):	Near base	Screen depth (mbgl):	2-3.5
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-3.41	Total depth (mAOD)	-3.71

Estimated volume pumped (Ltrs):	2	Flow Rate (ml/min)	140
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
09:12	7.40	9.4	902.9	32.9	395	3.47	-
09:17	7.41	10.1	875.9	27.5	270	3.51	-
09:22	7.40	10.2	889.4	30.8	251	3.52	-

Sample Description:

Pale brown, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Low pump rate due to column depth. Commenced sampling due to falling water level.

Laboratory Job Number:

Unknown.



Low Flow Monitoring & Sampling Test Report

Location:	WS13	Well diameter:	50
Report Number:	C0997/4895	Project:	Renaissance, Deansgate.
Client:	A2 Site Investigation Limited		
Test Date:	15/03/2022	Operator:	Paul Brennan

Level Measurements taken to:	Top of cover.		
Depth to water (m):	3.41	Total depth (m):	4.10
Depth to LNAPL (m):	ND	Depth to DNAPL (m):	ND
Cover level above ground level (m):	GL	Pipe below cover (m):	0.14
Approximate tube position (m):	Near base	Screen depth (mbgl):	2-4
Cover level (mAOD):	0.00		
Initial depth to water (mAOD)	-3.41	Total depth (mAOD)	-4.10

Estimated volume pumped (Ltrs):	19	Flow Rate (ml/min)	390-440
Pump Type - Solinst 410 Peristaltic.		Tubing type:	LDPE
Device Model - SmarTROLL MP		Device S/N -	339309

Time	pH	Temperature	Electrical Conductivity	Dissolved Oxygen	ORP	Depth	Depth
(hh:mm)	(pH Units)	(°C)	(µS/cm)	(%)	(mV)	(m)	(mAOD)
10:12	7.37	9.1	851.7	42.9	319	3.48	-
10:17	7.35	8.2	914.1	2.5	235	3.47	-
10:22	7.35	8.2	944.1	1.6	220	3.48	-
10:27	7.36	8.2	951.9	1.4	210	3.48	-
10:32	7.35	8.2	953.8	1.4	201	3.48	-
10:37	7.35	8.3	957.7	1.3	193	3.48	-
10:42	7.35	8.3	955.2	1.3	186	3.48	-
10:47	7.35	8.3	964.4	1.3	182	3.48	-
10:52	7.35	8.3	962.2	1.2	176	3.48	-

Sample Description:

Clear with grey tint, no obvious odour or sheen.

Containers:

1 x 1ltr glass, 1 x 1ltr plastic, 2 x vials, 1 x fixed cyanide, 1 x fixed ammonia & COD.

Comments:

Soft botom. Initial water heavy with sediment and allowed to bypass the flow through cell.

Laboratory Job Number:

Unknown.





Appendix D: Geotechnical Laboratory Testing



Laboratory Report



Contract Number: 57522

Client Ref: **17321**

Report Date: **04-02-2022**

Client PO: **PO503**

Client **A2 Site Investigation Limited**
Broom House, 39/43 London Road,
Hadleigh, Benfleet,
Essex
SS7 2QL

Contract Title: **Renaissance Manchester**
For the attention of: **Fernando Afonso**

Date Received: **12-01-2022**

Date Completed: **04-02-2022**

Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	1
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	1
PSD Wet Sieve method BS 1377:1990 - Part 2 : 9.2 - * UKAS	2
PSD: Sedimentation by pipette carried out with Wet Sieve (Wet Sieve must also be selected) BS 1377:1990 - Part 2 : 9.4 - * UKAS	2
BRE Reduced Suite includes pH, water & acid soluble sulphate and total sulphur Sub-contracted Test - @ Non Accredited Test	2
Quick Undrained Triaxial Compression test - single specimen at one confining pressure (100mm or 38mm diameter) BS 1377:1990 - Part 7 : 8 - * UKAS	1

Notes: Observations and Interpretations are outside the UKAS Accreditation
* - denotes test included in laboratory scope of accreditation
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

Emma Sharp (Business Support Manager) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (Quality Assistant / Administrator / Health and Safety Coordinator)

GEO Site & Testing Services Ltd

Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN

Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk



Laboratory Report



GEO Site & Testing Services Ltd

Contract Number: 57522

Test Description	Qty
Determination of Point Load Value Axial or Diametrical including WC *Please note GSTL is not accredited for the water content of rock* ISRM Suggested Method for Point Load Strength - * UKAS	3
Disposal of samples for job	1

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

- denotes test carried out by approved contractor

@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:

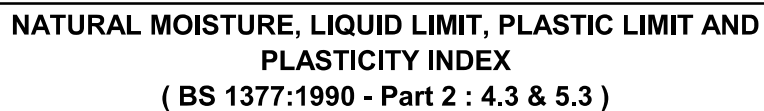
Emma Sharp (Business Support Manager) - Paul Evans (Director) - Richard John (Quality/Technical Manager)

Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Wayne Honey (Quality Assistant / Administrator / Health and Safety Coordinator)

GEO Site & Testing Services Ltd

Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN

Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk



Contract Number	57522	
Site Name	Renaissance Manchester	
Date Tested	26/01/2022	
	DESCRIPTIONS	

[illegible]

Operators	Checked	04/02/2022	Richard John (Advanced Testing Manager)
Darcy Etheridge	Approved	04/02/2022	Paul Evans (Quality/Technical Manager)

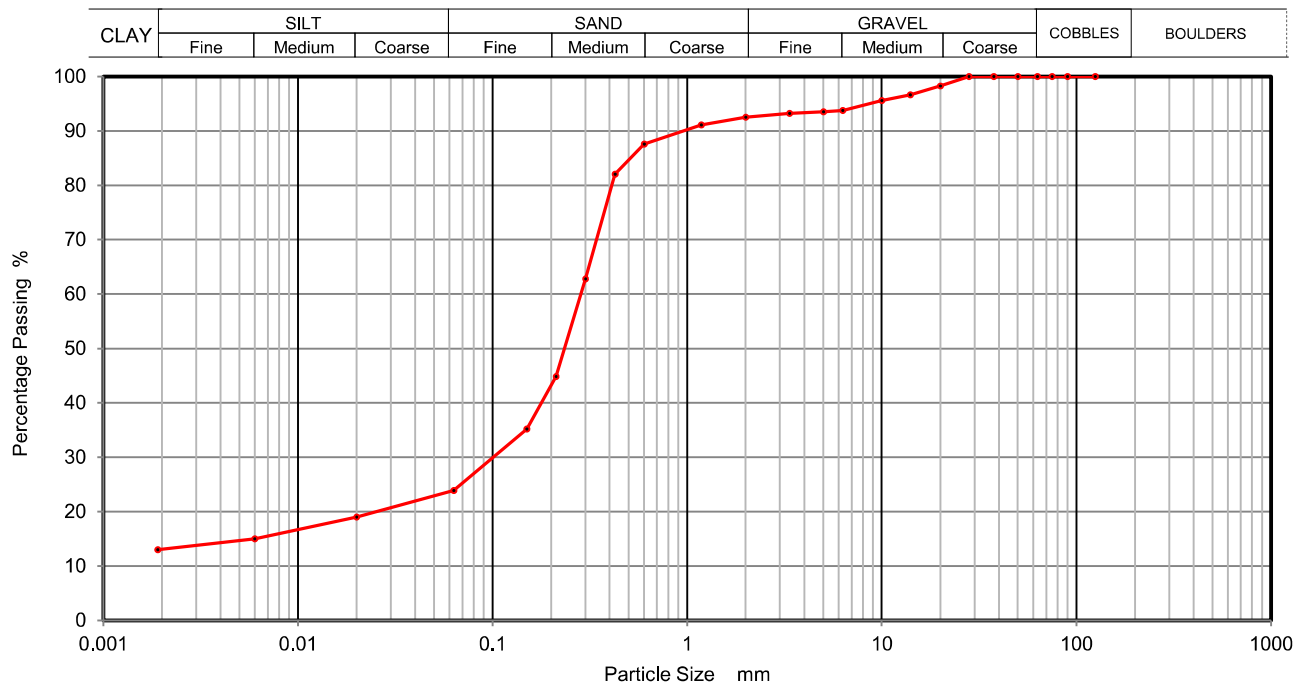




PARTICLE SIZE DISTRIBUTION
BS 1377 Part 2:1990
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Contract Number	Renaissance Manchester
Borehole/Pit No.	BH01
Sample No.	
Depth Top	2.00
Depth Base	2.50
Sample Type	B

Site Name	57522
Soil Description	Brown slightly fine to coarse gravelly silty clayey fine to coarse SAND
Date Tested	02/02/2022



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	19
90	100	0.0060	15
75	100	0.0020	13
63	100		
50	100		
37.5	100		
28	100		
20	98		
14	97		
10	96		
6.3	94		
5	94		
3.35	93		
2	93		
1.18	91		
0.6	88		
0.425	82		
0.3	63		
0.212	45		
0.15	35		
0.063	24		

Sample Proportions	% dry mass
Cobbles	0
Gravel	7
Sand	69
Silt	11
Clay	13

Remarks
Preparation and testing in accordance with BS1377 unless noted below

Operator	Checked	03/02/2022	Richard John	
David	Approved	04/02/2022	Paul Evans	

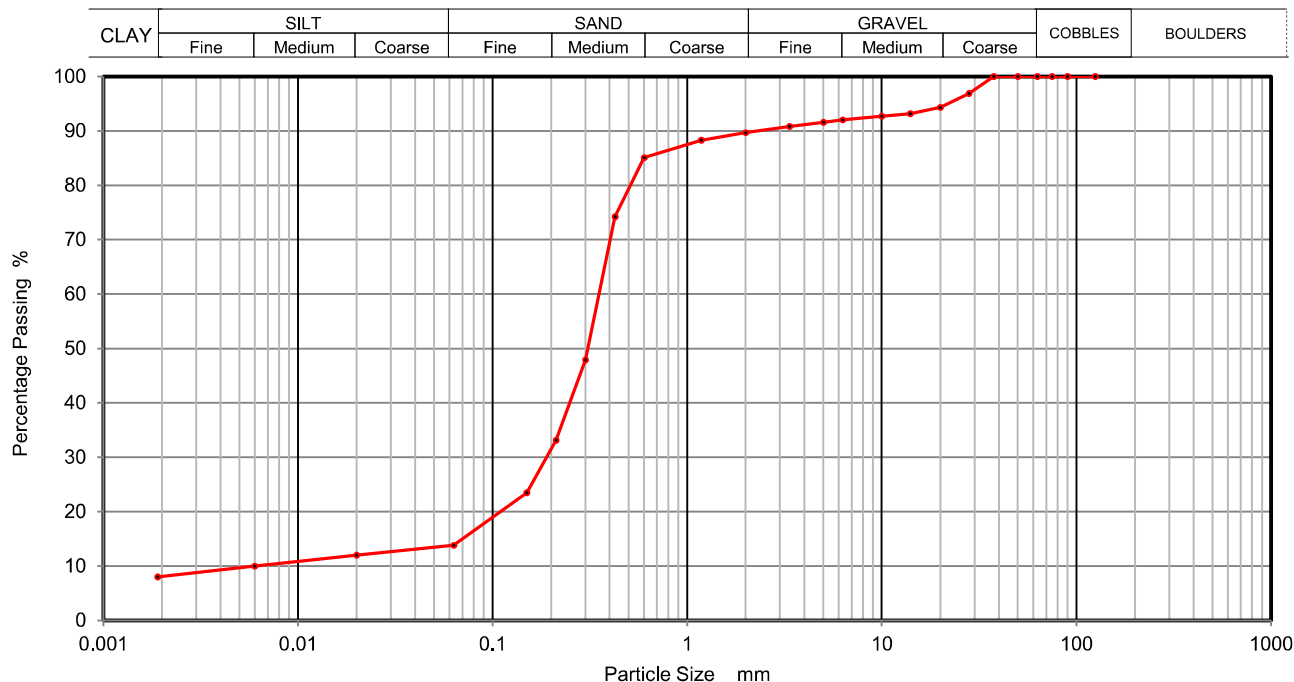




PARTICLE SIZE DISTRIBUTION
BS 1377 Part 2:1990
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Contract Number	Renaissance Manchester
Borehole/Pit No.	BH01
Sample No.	
Depth Top	4.00
Depth Base	4.50
Sample Type	B

Site Name	57522
Soil Description	Brown slightly silty slightly clayey fine to coarse gravelly fine to coarse SAND
Date Tested	02/02/2022



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	12
90	100	0.0060	10
75	100	0.0020	8
63	100		
50	100		
37.5	100		
28	97		
20	94		
14	93		
10	93		
6.3	92		
5	92		
3.35	91		
2	90		
1.18	88		
0.6	85		
0.425	74		
0.3	48		
0.212	33		
0.15	24		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	10
Sand	76
Silt	6
Clay	8

Remarks
Preparation and testing in accordance with BS1377 unless noted below

Operator	Checked	03/02/2022	Richard John	
David	Approved	04/02/2022	Paul Evans	





**Single Stage Unconsolidated-Undrained Triaxial
Test
BS 1377 : 1990 Part 7 : 8**

Contract Number 57522

Borehole/Pit No. BH01

Site Name Renaissance Manchester

Sample No.

Soil Description Brown silty CLAY

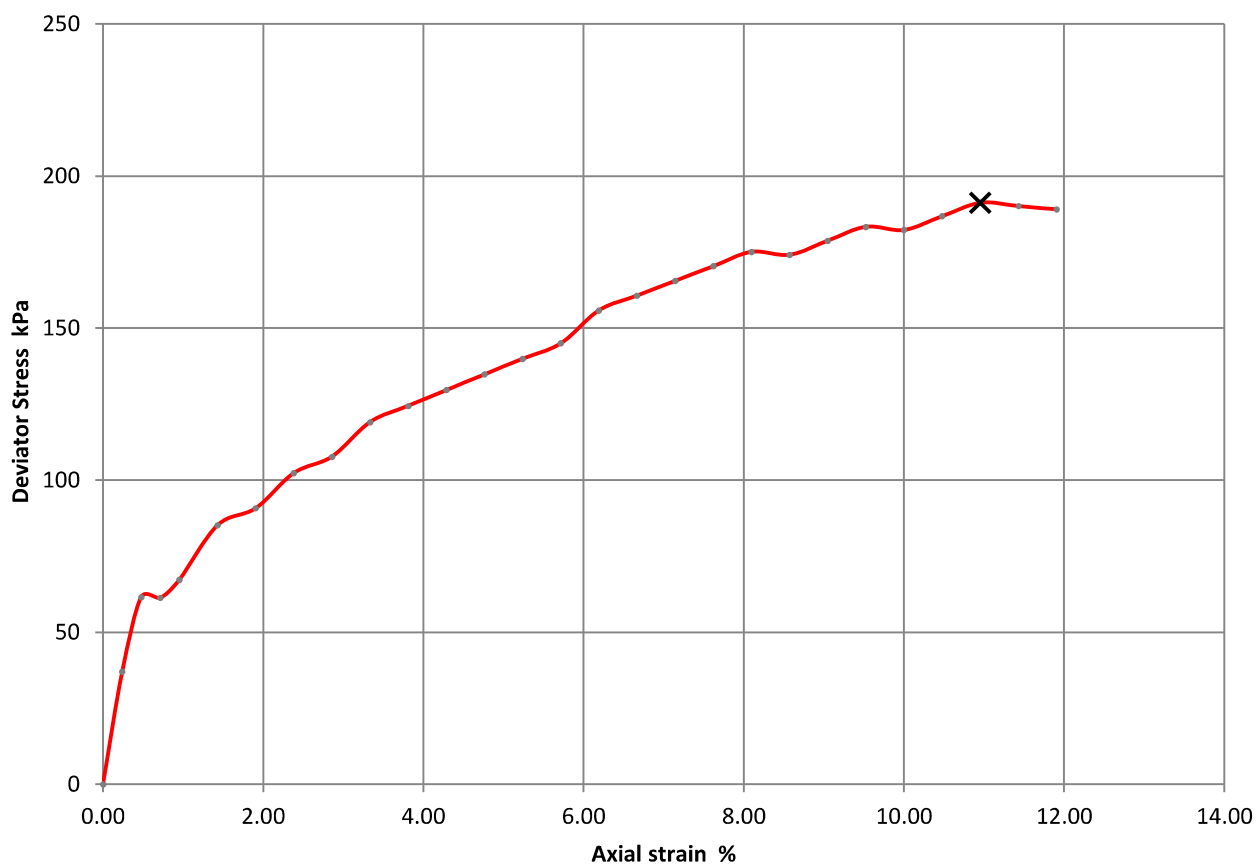
Depth Top (m) 3.30

Depth Base (m) 3.60

Date Tested 31/01/2022

Sample Type U

Technician Daniel B



Moisture Content (%)	13
Bulk Density (Mg/m ³)	2.03
Dry Density (Mg/m ³)	1.80
Specimen Length (mm)	210
Specimen Diameter (mm)	105
Cell Pressure (kPa)	60
Deviator Stress (kPa)	191
Undrained Shear Strength (kPa)	96
Failure Strain (%)	11
Mode Of Failure	Compound
Membrane Used/Thickness	Rubber/0.3mm
Rate of Strain (%/min)	1.43

Checked	03/02/2022	Richard John	
Approved	04/02/2022	Paul Evans	





ANALYTICAL TEST REPORT

Contract no: 104799

Contract name: Renaissance, Manchester

Client reference: 17321

Clients name: Geo Site & Testing Services

Clients address: Unit 3 and 4 Heol Aur
Dafen Industrial Estate, Dafen
Llanelli, Carmarthenshire
SA14 8QN

Samples received: 20 January 2022

Analysis started: 20 January 2022

Analysis completed: 27 January 2022

Report issued: 27 January 2022

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing

Approved by:

Megan Harris

Senior Reporting Administrator

Chemtech Environmental Limited

SOILS

Lab number			104799-1	104799-2
Sample id			BH01	BH01
Depth (m)			2.00-2.50	3.50
Sample Type			B	D
Date sampled			-	-
Test	Method	Units		
pH	CE004 ^U	units	8.9	8.9
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	<10	24
Sulphate (total)	CE062 ^U	mg/kg SO ₄	<100	<100
Sulphate (total)	CE062 ^U	% w/w SO ₄	<0.01	<0.01
Sulphur (total)	CE119	mg/kg S	<100	<100
Sulphur (total)	CE119	% w/w S	<0.01	<0.01

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	U	100	mg/kg SO ₄
CE062	Sulphate (total)	Acid extraction, ICP-OES	Dry	U	0.01	% w/w SO ₄
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		100	mg/kg S
CE119	Sulphur (total)	Acid extraction, ICP-OES	Dry		0.01	% w/w S

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

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

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

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

Key

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

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
104799-1	BH01	2.00-2.50	Y	All (NSD)
104799-2	BH01	3.50	Y	All (NSD)

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

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

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

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

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.



Appendix E: Geo-Environmental Testing



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-37881

Issue: 1

Date of Issue: 11/01/2022

Contact: ELAB Results

Customer Details: A2 Site Investigation Limited
One Westminster Bridge Road
South Bank
London
SE1 7XW

Quotation No: Q20-01974

Order No: PO507

Customer Reference: 17321

Date Received: 23/12/2021

Date Approved: 11/01/2022

Details: Reniassance, Manchester

Approved by:

Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

This report may only be reproduced in full



Sample Summary

Report No.: 22-37881, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
262855	BH01 0.40	20/12/2021	04/01/2022	Loamy sand	g
262856	BH01 1.20	20/12/2021	04/01/2022		
262857	BH01 1.70	21/12/2021	04/01/2022	Sand	
262858	BH01 5.00	21/12/2021	04/01/2022		
262859	BH01 3.00	21/12/2021	04/01/2022	Sand	
262860	BH01 4.00	21/12/2021	04/01/2022	Sandy clay	
262861	WS01 0.40	20/12/2021	04/01/2022		
262862	WS01 1.20	20/12/2021	04/01/2022	Loamy sand	g
262863	WS02 0.50	20/12/2021	04/01/2022	Sandy silty loam	g
262864	WS02 1.30	20/12/2021	04/01/2022		
262865	WS02 2.30	21/12/2021	04/01/2022	Sandy loam	g
262866	WS02 3.00	21/12/2021	04/01/2022		
262867	WS02 3.80	21/12/2021	04/01/2022		
262868	WS03 0.40	20/12/2021	04/01/2022	Loamy sand	g
262869	WS03 1.30	20/12/2021	04/01/2022		
262870	WS04 0.50	20/12/2021	04/01/2022		
262871	WS04 1.30	20/12/2021	04/01/2022	Loamy sand	g
262872	WS05 0.50	20/12/2021	04/01/2022		
262873	WS05 1.30	20/12/2021	04/01/2022	Loamy sand	g

Results Summary

Report No.: 22-37881, issue number 1

ELAB Reference	262855	262857	262859	262860	262862	262863	262865	262868	262871	262873
Customer Reference										
Sample ID										
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	BH01	BH01	BH01	BH01	WS01	WS02	WS02	WS03	WS04	WS05
Sample Depth (m)	0.40	1.70	3.00	4.00	1.20	0.50	2.30	0.40	1.30	1.30
Sampling Date	20/12/2021	21/12/2021	21/12/2021	21/12/2021	20/12/2021	20/12/2021	21/12/2021	20/12/2021	20/12/2021	20/12/2021

Determinand	Codes	Units	LOD										
Soil sample preparation parameters													
Moisture Content	N	%	0.1	11.9	14.4	17.9	13.1	11.7	4.9	6.4	10.3	12.1	10.5
Material removed	N	%	0.1	42.5	14.8	< 0.1	< 0.1	42.5	68.9	61.3	51.0	41.3	45.7
Description of Inert material removed	N		0	Stones,clinker	Stones	None	None	Stones	Stones	Stones	Stones,clinker	Stones,clinker	Stones
Metals													
Arsenic	M	mg/kg	1	37.5	n/t	n/t	n/t	17.2	8.3	7.8	14.7	22.8	18.9
Barium	U	mg/kg	10	325	n/t	n/t	n/t	238	1090	80.4	169	266	302
Beryllium	U	mg/kg	1	4.0	n/t	n/t	n/t	1.1	1.1	< 1.0	1.4	1.3	1.1
Cadmium	M	mg/kg	0.5	0.6	n/t	n/t	n/t	0.9	2.1	1.8	0.6	1.1	0.9
Chromium	M	mg/kg	5	41.6	n/t	n/t	n/t	26.3	19.6	15.7	25.7	28.3	29.6
Chromium (III)	N	mg/kg	5	41.6	n/t	n/t	n/t	26.3	19.6	15.7	25.7	28.3	29.6
Copper	M	mg/kg	5	154	n/t	n/t	n/t	77.2	29.8	19.8	55.2	128	89.1
Lead	M	mg/kg	5	157	n/t	n/t	n/t	206	95.5	27.2	142	500	220
Mercury	M	mg/kg	0.5	< 0.5	n/t	n/t	n/t	1.1	< 0.5	< 0.5	< 0.5	5.0	1.3
Molybdenum	N	mg/kg	0.5	8.4	n/t	n/t	n/t	2.0	1.8	1.3	2.9	2.2	2.0
Nickel	M	mg/kg	5	69.5	n/t	n/t	n/t	28.2	41.4	26.4	34.8	31.8	28.4
Selenium	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium	M	mg/kg	5	72.2	n/t	n/t	n/t	25.5	18.7	11.9	31.2	31.2	27.8
Zinc	M	mg/kg	5	192	n/t	n/t	n/t	144	169	197	129	217	155
Anions													
Water Soluble Sulphate	M	g/l	0.02	n/t	0.02	< 0.02	0.03	n/t	n/t	n/t	n/t	n/t	n/t
Water Soluble Sulphate	M	mg/kg	40	180	n/t	n/t	n/t	41	182	210	166	180	54
Inorganics													
Free Cyanide	N	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	n/t	n/t	n/t	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Cyanide	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphur	N	%	0.01	n/t	0.02	0.01	0.01	n/t	n/t	n/t	n/t	n/t	n/t
Acid Soluble Sulphate (SO4)	U	%	0.02	n/t	0.02	< 0.02	0.02	n/t	n/t	n/t	n/t	n/t	n/t
Water Soluble Boron	N	mg/kg	0.5	1.9	n/t	n/t	n/t	< 0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5

Results Summary

Report No.: 22-37881, issue number 1

				262855	262857	262859	262860	262862	262863	262865	262868	262871	262873
ELAB Reference													
Customer Reference													
Sample ID													
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location				BH01	BH01	BH01	BH01	WS01	WS02	WS02	WS03	WS04	WS05
Sample Depth (m)				0.40	1.70	3.00	4.00	1.20	0.50	2.30	0.40	1.30	1.30
Sampling Date				20/12/2021	21/12/2021	21/12/2021	21/12/2021	20/12/2021	20/12/2021	21/12/2021	20/12/2021	20/12/2021	20/12/2021
Determinand	Codes	Units	LOD										
Miscellaneous													
Fraction of Organic Carbon	N		0.0001	0.0250	n/t	n/t	n/t	0.0100	0.0040	0.0020	0.0080	0.0150	0.0100
pH	M	pH units	0.1	9.7	8.7	8.8	8.5	9.0	8.9	8.8	9.7	9.4	9.2
Soil Organic Matter	U	%	0.1	4.0	n/t	n/t	n/t	1.6	0.5	0.2	1.1	2.4	1.5
Total Organic Carbon	N	%	0.01	2.5	n/t	n/t	n/t	1.0	0.40	0.20	0.80	1.5	1.0
Phenols													
Phenol	M	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
M,P-Cresol	N	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
O-Cresol	N	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
3,4-Dimethylphenol	N	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
2,3-Dimethylphenol	M	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
2,3,5-trimethylphenol	M	mg/kg	1	< 1	n/t	n/t	n/t	< 1	n/t	n/t	n/t	< 1	n/t
Total Monohydric Phenols	N	mg/kg	5	< 5	n/t	n/t	n/t	< 5	n/t	n/t	n/t	< 5	n/t
Polyaromatic hydrocarbons													
Napthalene	M	mg/kg	0.1	< 0.1	n/t	n/t	n/t	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	n/t	n/t	n/t	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1
Acenaphthene	M	mg/kg	0.1	0.3	n/t	n/t	n/t	0.1	< 0.1	< 0.1	0.2	4.6	0.1
Fluorene	M	mg/kg	0.1	0.2	n/t	n/t	n/t	< 0.1	< 0.1	< 0.1	0.1	2.9	< 0.1
Phenanthrene	M	mg/kg	0.1	2.1	n/t	n/t	n/t	0.8	0.4	< 0.1	1.4	26.1	0.8
Anthracene	M	mg/kg	0.1	0.5	n/t	n/t	n/t	0.2	0.1	< 0.1	0.3	5.7	0.2
Fluoranthene	M	mg/kg	0.1	2.4	n/t	n/t	n/t	0.8	0.7	0.1	2.5	31.4	1.0
Pyrene	M	mg/kg	0.1	2.0	n/t	n/t	n/t	0.8	0.6	0.1	2.0	27.1	0.9
Benzo(a)anthracene	M	mg/kg	0.1	1.0	n/t	n/t	n/t	0.4	0.3	< 0.1	1.0	12.2	0.5
Chrysene	M	mg/kg	0.1	1.3	n/t	n/t	n/t	0.5	0.4	< 0.1	1.3	15.8	0.7
Benzo(b)fluoranthene	M	mg/kg	0.1	1.1	n/t	n/t	n/t	0.5	0.3	< 0.1	1.0	17.1	0.5
Benzo(k)fluoranthene	M	mg/kg	0.1	1.1	n/t	n/t	n/t	0.5	0.3	< 0.1	1.2	10.4	0.5
Benzo(a)pyrene	M	mg/kg	0.1	1.1	n/t	n/t	n/t	0.5	0.3	< 0.1	1.1	13.2	0.5
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.7	n/t	n/t	n/t	0.2	0.2	< 0.1	0.7	8.0	0.4
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.2	n/t	n/t	n/t	< 0.1	< 0.1	< 0.1	0.2	1.6	0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	0.5	n/t	n/t	n/t	0.2	0.2	< 0.1	0.6	7.1	0.3
Total PAH(16)	M	mg/kg	0.4	14.6	n/t	n/t	n/t	5.6	4.1	0.8	13.8	184	6.7

Results Summary

Report No.: 22-37881, issue number 1

ELAB Reference	262855	262857	262859	262860	262862	262863	262865	262868	262871	262873
Customer Reference										
Sample ID										
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	BH01	BH01	BH01	BH01	WS01	WS02	WS02	WS03	WS04	WS05
Sample Depth (m)	0.40	1.70	3.00	4.00	1.20	0.50	2.30	0.40	1.30	1.30
Sampling Date	20/12/2021	21/12/2021	21/12/2021	21/12/2021	20/12/2021	20/12/2021	21/12/2021	20/12/2021	20/12/2021	20/12/2021
Determinand	Codes	Units	LOD							
BTEX										
Benzene	M	ug/kg	10	g < 10.0	n/t	n/t	n/t	g < 10.0	g < 10.0	g < 10.0
Toluene	M	ug/kg	10	g < 10.0	n/t	n/t	n/t	g < 10.0	g < 10.0	g < 10.0
Ethylbenzene	M	ug/kg	10	g < 10.0	n/t	n/t	n/t	g < 10.0	g < 10.0	g < 10.0
Xylenes	M	ug/kg	10	g < 10.0	n/t	n/t	n/t	g < 10.0	g < 10.0	g < 10.0
MTBE	N	ug/kg	10	g < 10.0	n/t	n/t	n/t	g < 10.0	g < 10.0	g < 10.0
TPH CWG										
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	g < 0.01	n/t	n/t	n/t	g < 0.01	g < 0.01	g < 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	g < 0.01	n/t	n/t	n/t	g < 0.01	g < 0.01	g < 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	7.3	n/t	n/t	n/t	< 1.0	6.4	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	1.8	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	8.2	n/t	n/t	n/t	< 1.0	8.8	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	g < 0.01	n/t	n/t	n/t	g < 0.01	g < 0.01	g < 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	g < 0.01	n/t	n/t	n/t	g < 0.01	g < 0.01	g < 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	2.8	n/t	n/t	n/t	1.1	1.2	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	8.9	n/t	n/t	n/t	4.4	11.6	< 1.0
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	n/t	n/t	n/t	1.0	3.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	13.1	n/t	n/t	n/t	6.9	16.2	1.5
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	21.3	n/t	n/t	n/t	7.3	25.0	1.6



Results Summary

2683

Report No.: 22-37881, issue number 1

ELAB Reference	262855	262862	262871
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	BH01	WS01	WS04
Sample Depth (m)	0.40	1.20	1.30
Sampling Date	20/12/2021	20/12/2021	20/12/2021

Determinand	Codes	Units	LOD			
VOC						
Heptane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Octane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Nonane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
m+p-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
o-xylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
cis-1,2-dichloroethene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Chloroform	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Tetrachloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,1-Trichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Trichloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Tetrachloroethylene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,1,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,2,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Chlorobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromobenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromodichloromethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Methylethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Trans - 1-2 -dichloroethylene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
2,2-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Dibromomethane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichloropropane	M	ug/kg	10	< 10.0	< 10.0	< 10.0
cis-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
trans-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
1,1,2-Trichloroethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Dibromochloromethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-dibromoethane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Styrene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Propylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
2-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2,4-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
4-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
t-butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3,5-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1-methylpropylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
p-cymene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,3-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Butylbenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Hexachlorobutadiene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1-2-3 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Naphthalene	N	ug/kg	10	< 10.0	< 10.0	15.3
1-2-4 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,4-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
1,2-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0	< 10.0
Bromoform	N	ug/kg	10	< 10.0	< 10.0	< 10.0

Tests marked N are not UKAS accredited.
The Environmental Laboratory Ltd. Reg. No. 3882193



Results Summary

2683

Report No.: 22-37881, issue number 1

ELAB Reference	262855	262862	262863	262865	262868	262871	262873
Customer Reference							
Sample ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	BH01	WS01	WS02	WS02	WS03	WS04	WS05
Sample Depth (m)	0.40	1.20	0.50	2.30	0.40	1.30	1.30
Sampling Date	20/12/2021	20/12/2021	20/12/2021	21/12/2021	20/12/2021	20/12/2021	20/12/2021

Determinand	Codes	Units	LOD							
Metals										
Chromium (III)	N	ug/l	5	15	< 5	< 5	< 5	< 5	< 5	6
Arsenic 2:1 extract	N	ug/l	5	99	22	< 5	< 5	6	11	24
Barium 2:1 extract	N	ug/l	5	17	5	33	25	15	11	< 5
Beryllium 2:1 extract	N	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Boron 2:1 extract	N	ug/l	5	89	< 5	10	< 5	< 5	7	< 5
Cadmium 2:1 extract	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chromium 2:1 extract	N	ug/l	5	15	< 5	< 5	< 5	< 5	< 5	6
Copper 2:1 extract	N	ug/l	5	86	56	63	44	44	42	37
Lead 2:1 extract	N	ug/l	5	10	< 5	< 5	< 5	< 5	< 5	< 5
Mercury 2:1 extract	N	ug/l	0.1	0.2	0.1	0.1	0.1	< 0.1	0.2	0.1
Molybdenum 2:1 extract	N	ug/l	5	8	< 5	< 5	< 5	< 5	< 5	< 5
Nickel 2:1 extract	N	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Selenium 2:1 extract	N	ug/l	5	9	< 5	< 5	< 5	< 5	< 5	< 5
Vanadium 2:1 extract	N	ug/l	5	62	6	< 5	< 5	5	< 5	8
Zinc 2:1 extract	N	ug/l	5	20	11	8	23	14	9	8



Results Summary

2683

Report No.: 22-37881, issue number 1

ELAB Reference	262855	262862	262863	262865	262868	262871	262873
Customer Reference							
Sample ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sample Location	BH01	WS01	WS02	WS02	WS03	WS04	WS05
Sample Depth (m)	0.40	1.20	0.50	2.30	0.40	1.30	1.30
Sampling Date	20/12/2021	20/12/2021	20/12/2021	21/12/2021	20/12/2021	20/12/2021	20/12/2021

Determinand	Codes	Units	LOD							
Inorganics										
Hexavalent chromium	N	ug/l	100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Free Cyanide	N	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Total Cyanide	N	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Polyaromatic hydrocarbons										
Naphthalene Leachate GCMS	N	ug/l	0.01	0.02	0.02	0.02	0.01	0.04	< 0.01	0.02
Acenaphthylene Leachate GCMS	N	ug/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	0.01
Acenaphthene Leachate GCMS	N	ug/l	0.01	0.01	0.03	0.01	0.01	0.14	0.01	0.01
Fluorene Leachate GCMS	N	ug/l	0.01	< 0.01	0.01	< 0.01	< 0.01	0.02	< 0.01	0.01
Phenanthrene Leachate GCMS	N	ug/l	0.01	0.04	0.19	0.05	0.06	1.29	0.03	0.08
Anthracene Leachate GCMS	N	ug/l	0.01	0.01	0.05	< 0.01	0.01	0.13	0.01	0.03
Fluoranthene Leachate GCMS	N	ug/l	0.01	0.02	0.18	0.02	0.02	0.22	0.05	0.09
Pyrene Leachate GCMS	N	ug/l	0.01	0.04	0.22	0.02	0.02	2.12	0.06	0.10
Benzo (a) anthracene Leachate GCMS	N	ug/l	0.01	0.01	0.04	0.01	< 0.01	0.27	0.03	0.05
Chrysene Leachate GCMS	N	ug/l	0.01	0.02	0.11	0.01	< 0.01	0.38	0.02	0.05
Benzo (b) fluoranthene Leachate GCMS	N	ug/l	0.01	0.02	0.06	0.01	< 0.01	0.34	0.02	0.04
Benzo (k) fluoranthene Leachate GCMS	N	ug/l	0.01	0.02	0.06	0.01	< 0.01	0.30	0.02	0.03
Benzo (a) pyrene Leachate GCMS	N	ug/l	0.01	0.04	0.07	0.01	< 0.01	0.25	0.02	0.04
Indeno (1,2,3-cd) pyrene Leachate GCMS	N	ug/l	0.01	0.01	0.03	< 0.01	< 0.01	0.26	< 0.01	0.02
Dibenzo(a,h)anthracene Leachate GCMS	N	ug/l	0.01	0.01	0.02	< 0.01	< 0.01	0.18	< 0.01	0.01
Benzo(ghi)perylene Leachate GCMS	N	ug/l	0.01	0.02	0.04	0.01	< 0.01	0.38	0.01	0.03
Total PAH(16) Leachate GCMS	N	ug/l	0.01	0.32	1.15	0.22	0.18	6.31	0.32	0.62

Results Summary

Report No.: 22-37881, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
262855	0.40	BH01	Brown sandy soil with stones,brick,clinker	No asbestos detected	n/t	n/t	n/t	n/t
262862	1.20	WS01	Brown sandy soil with stones,brick,clinker	No asbestos detected	n/t	n/t	n/t	n/t
262863	0.50	WS02	Brown soil with stones	No asbestos detected	n/t	n/t	n/t	n/t
262865	2.30	WS02	Brown soil with stones	No asbestos detected	n/t	n/t	n/t	n/t
262868	0.40	WS03	Brown sandy soil with stones,clinker	No asbestos detected	n/t	n/t	n/t	n/t
262871	1.30	WS04	Brown sandy soil with stones,brick,clinker	No asbestos detected	n/t	n/t	n/t	n/t
262873	1.30	WS05	Brown sandy soil with stones,clinker	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 22-37881, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Leachate cyanide 10:1 extract	N		10/01/2022		Colorimetry
Leachate metals 2:1 extract	N		11/01/2022	101	ICPMS
Free cyanide	N	As submitted sample	05/01/2022	107	Colorimetry
Hexavalent chromium	N	As submitted sample	05/01/2022	110	Colorimetry
pH	M	Air dried sample	05/01/2022	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	07/01/2022	115	Ion Chromatography
Aqua regia extractable metals	M	Air dried sample	05/01/2022	118	ICPMS
Phenols in solids	M	As submitted sample	05/01/2022	121	HPLC
PAH (GC-FID)	M	As submitted sample	05/01/2022	133	GC-FID
PAHs and/or PCBs in leachates	N		10/01/2022	135	GC-MS
Water soluble anions	M	Air dried sample	05/01/2022	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	05/01/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	05/01/2022	181	GC-MS
VOC in solids	M	As submitted sample	05/01/2022	181	GC-MS
BTEX in solids	M	As submitted sample	05/01/2022	181A	GC-MS
Water soluble boron	N	Air dried sample	06/01/2022	202	Colorimetry
Total cyanide	M	As submitted sample	05/01/2022	204	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/01/2022	210	IR
TPH CWG soil by gc-gc	M	As submitted sample	05/01/2022	271	
Asbestos identification	U	Air dried sample	06/01/2022	280	Microscopy
Soil organic matter	U	Air dried sample	06/01/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-37881, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-38986

Issue: 1

Date of Issue: 04/03/2022

Contact: LAB@A2 SI

Customer Details: A2 Site Investigation Limited
One Westminster Bridge Road
South Bank
London
SE1 7XW

Quotation No: Q20-01974

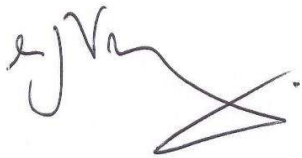
Order No: PO507

Customer Reference: 17321

Date Received: 25/02/2022

Date Approved: 04/03/2022

Details: Renaissance, Manchester

Approved by: 

Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

This report may only be reproduced in full



Sample Summary

Report No.: 22-38986, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
269593	WS08 0.50	23/02/2022	25/02/2022	Loamy sand	
269594	WS08A 0.50	23/02/2022	25/02/2022		
269595	WS08B 0.60	23/02/2022	25/02/2022		
269596	WS09A 0.50	23/02/2022	25/02/2022	Sand	
269597	WS09A 1.50	23/02/2022	25/02/2022		
269598	WS09A 2.50	23/02/2022	25/02/2022		
269599	WS09A 3.50	23/02/2022	25/02/2022		
269600	WS13 0.50	22/02/2022	25/02/2022	Loamy sand	
269601	WS13 1.50	22/02/2022	25/02/2022	Loamy sand	
269602	WS13 2.50	22/02/2022	25/02/2022		
269603	WS13 3.50	22/02/2022	25/02/2022		
269604	WS13 4.00	22/02/2022	25/02/2022		
269605	WS13 5.00	22/02/2022	25/02/2022		
269606	WS11 0.50	22/02/2022	25/02/2022		
269607	WS12 0.50	22/02/2022	25/02/2022		
269608	WS10 0.50	23/02/2022	25/02/2022	Loamy sand	
269609	WS10 1.50	23/02/2022	25/02/2022	Loamy sand	
269610	WS10 2.50	23/02/2022	25/02/2022		
269611	WS10 3.50	23/02/2022	25/02/2022		
269612	WS10 4.50	23/02/2022	25/02/2022		
269613	WS10 5.50	23/02/2022	25/02/2022		
269614	WS07 0.50	23/02/2022	25/02/2022		
269615	WS07A 0.40	23/02/2022	25/02/2022		



Results Summary

2683

Report No.: 22-38986, issue number 1

ELAB Reference	269593	269596	269600
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	WS08	WS09A	WS13
Sample Depth (m)	0.50	0.50	0.50
Sampling Date	23/02/2022	23/02/2022	22/02/2022

Determinand	Codes	Units	LOD			
Soil sample preparation parameters						
Moisture Content	N	%	0.1	11.9	8.5	16.9
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	0.3
Pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.3
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	0.2
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	0.2
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	0.2
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.2
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	1.9
BTEX						
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0	< 10.0
TPH CWG						
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	2.3	< 1.0	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	3.7	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	1.8	< 1.0	< 1.0
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	3.2	< 1.0	< 1.0
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	6.9	< 1.0	< 1.0

Results Summary

2683

Report No.: 22-38986, issue number 1

ELAB Reference	269601	269608	269609
Customer Reference			
Sample ID			
Sample Type	SOIL	SOIL	SOIL
Sample Location	WS13	WS10	WS10
Sample Depth (m)	1.50	0.50	1.50
Sampling Date	22/02/2022	23/02/2022	23/02/2022

Determinand	Codes	Units	LOD			
Soil sample preparation parameters						
Moisture Content	N	%	0.1	11.2	24.0	18.4
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4	< 0.4
BTEX						
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0	< 10.0
TPH CWG						
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	3.4
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	5.3
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	8.2
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	10.1
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	< 1.0	< 1.0	15.4



Results Summary

2683

Report No.: 22-38986, issue number 1

ELAB Reference	269600	269608
Customer Reference		
Sample ID		
Sample Type	SOIL	SOIL
Sample Location	WS13	WS10
Sample Depth (m)	0.50	0.50
Sampling Date	22/02/2022	23/02/2022

Determinand	Codes	Units	LOD		
VOC					
Heptane	N	ug/kg	10	< 10.0	< 10.0
Octane	N	ug/kg	10	< 10.0	< 10.0
Nonane	N	ug/kg	10	< 10.0	< 10.0
Benzene	M	ug/kg	10	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0
m+p-xylene	M	ug/kg	10	< 10.0	< 10.0
o-xylene	M	ug/kg	10	< 10.0	< 10.0
cis-1,2-dichloroethene	N	ug/kg	10	< 10.0	< 10.0
1,1-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0
Chloroform	M	ug/kg	10	< 10.0	< 10.0
Tetrachloromethane	M	ug/kg	10	< 10.0	< 10.0
1,1,1-Trichloroethane	M	ug/kg	10	< 10.0	< 10.0
Trichloroethylene	M	ug/kg	10	< 10.0	< 10.0
Tetrachloroethylene	M	ug/kg	10	< 10.0	66.4
1,1,1,2-Tetrachloroethane	M	ug/kg	10	< 10.0	< 10.0
1,1,2,2-Tetrachloroetha	M	ug/kg	10	< 10.0	< 10.0
Chlorobenzene	M	ug/kg	10	< 10.0	< 10.0
Bromobenzene	M	ug/kg	10	< 10.0	< 10.0
Bromodichloromethane	M	ug/kg	10	< 10.0	< 10.0
Methylethylbenzene	M	ug/kg	10	< 10.0	< 10.0
1,1-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0
Trans - 1-2 -dichloroethylene	N	ug/kg	10	< 10.0	< 10.0
2,2-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0
Bromochloromethane	N	ug/kg	10	< 10.0	< 10.0
1,2-Dichloroethane	M	ug/kg	10	< 10.0	< 10.0
Dibromomethane	M	ug/kg	10	< 10.0	< 10.0
1,2-Dichloropropane	M	ug/kg	10	< 10.0	< 10.0
cis-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0
trans-1,3-Dichloro-1-propene	M	ug/kg	10	< 10.0	< 10.0
1,1,2-Trichloroethane	N	ug/kg	10	< 10.0	< 10.0
Dibromochloromethane	N	ug/kg	10	< 10.0	< 10.0
1,3-Dichloropropane	N	ug/kg	10	< 10.0	< 10.0
1,2-dibromoethane	N	ug/kg	10	< 10.0	< 10.0
Styrene	N	ug/kg	10	< 10.0	< 10.0
Propylbenzene	N	ug/kg	10	< 10.0	< 10.0
2-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0
1,2,4-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0
4-Chlorotoluene	N	ug/kg	10	< 10.0	< 10.0
t-butylbenzene	N	ug/kg	10	< 10.0	< 10.0
1,3,5-Trimethylbenzene	N	ug/kg	10	< 10.0	< 10.0
1-methylpropylbenzene	N	ug/kg	10	< 10.0	< 10.0
p-cymene	N	ug/kg	10	< 10.0	< 10.0
1,3-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0
Butylbenzene	N	ug/kg	10	< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	N	ug/kg	10	< 10.0	< 10.0
Hexachlorobutadiene	N	ug/kg	10	< 10.0	< 10.0
1-2-3 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0
Naphthalene	N	ug/kg	10	< 10.0	< 10.0
1-2-4 - Trichlorobenzene	N	ug/kg	10	< 10.0	< 10.0
1,4-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0
1,2-Dichlorobenzene	N	ug/kg	10	< 10.0	< 10.0
Bromoform	N	ug/kg	10	< 10.0	< 10.0

Tests marked N are not UKAS accredited.
The Environmental Laboratory Ltd. Reg. No. 3882193



Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY
Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

Results Summary

Report No.: 22-38986, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
269593	0.50	WS08	Brown Sandy	No asbestos detected	n/t	n/t	n/t	n/t
269596	0.50	WS09A	Brown Sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
269600	0.50	WS13	Brown sandy Soil,Stones,Concrete,Brick	No asbestos detected	n/t	n/t	n/t	n/t
269601	1.50	WS13	brown sandy soil,Stones,Clinker	No asbestos detected	n/t	n/t	n/t	n/t
269606	0.50	WS11	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
269607	0.50	WS12	Brown sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
269608	0.50	WS10	Brown sandy Soil,Stones,Clinker	No asbestos detected	n/t	n/t	n/t	n/t
269609	1.50	WS10	Brown Sandy Soil,Stones,Clinker	No asbestos detected	n/t	n/t	n/t	n/t
269614	0.50	WS07	Brown sandy Soil,Stones,Clinker	No asbestos detected	n/t	n/t	n/t	n/t



Method Summary

Report No.: 22-38986, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
PAH (GC-FID)	M	As submitted sample	01/03/2022	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	04/03/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	04/03/2022	181	GC-MS
VOC in solids	M	As submitted sample	04/03/2022	181	GC-MS
BTEX in solids	M	As submitted sample	04/03/2022	181A	GC-MS
TPH CWG soil by gc-gc	M	As submitted sample	28/02/2022	271	
Asbestos identification	U	Air dried sample	04/03/2022	280	Microscopy

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-38986, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-39468

Issue: 2. Replaces Analytical Report number 22-39468; issue no.1

Date of Issue: 29/03/2022

Contact: Fernando Afonso

Customer Details: A2 Site Investigation Limited
One Westminster Bridge Road
South Bank
London
SE1 7XW

Quotation No: Q20-01974

Order No: PO695

Customer Reference: 17321

Date Received: 21/03/2022

Date Approved: 29/03/2022

Details: Renaissance, Manchester

Approved by:

Mike Varley, General Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

This report may only be reproduced in full



Sample Summary

Report No.: 22-39468, issue number 2

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
272020	RB103 3.32	15/03/2022	21/03/2022		
272021	RB104 2.12	15/03/2022	21/03/2022		
272022	RB105 2.17	15/03/2022	21/03/2022		
272023	RB106 2.10	15/03/2022	21/03/2022		
272024	WS09A 3.41	15/03/2022	21/03/2022		
272025	WS13 3.41	15/03/2022	21/03/2022		



Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference	272020	272021	272022	272023	272024	272025
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)	3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022

Determinand	Codes	Units	LOD						
Dissolved Metals									
Arsenic	U	ug/l	0.5	< 0.5	3.0	0.6	< 0.5	2.3	1.8
Boron	N	ug/l	5	206	111	45	13	83	87
Barium	U	ug/l	1	38	90	41	191	38	80
Beryllium	U	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Cadmium	U	ug/l	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	U	ug/l	0.5	< 0.5	1.0	1.2	0.6	2.4	< 0.5
Chromium (III)	N	ug/l	0.5	< 0.5	≤ 1.0	≤ 1.2	≤ 0.6	≤ 2.4	< 0.5
Copper	U	ug/l	0.5	0.6	7.4	< 0.5	0.5	3.4	2.9
Mercury	U	ug/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Molybdenum	U	ug/l	1	< 1	6	< 1	< 1	7	4
Nickel	U	ug/l	0.5	2.1	8.3	< 0.5	1.8	1.2	2.3
Lead	U	ug/l	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.1
Selenium	U	ug/l	1	< 1	4	< 1	2	2	< 1
Vanadium	U	ug/l	0.5	< 0.5	7.0	< 0.5	< 0.5	1.6	< 0.5
Zinc	U	ug/l	1.2	10.9	23.3	< 1.2	16.8	3.0	13.8
Anions									
Sulphate	U	mg/l	0.5	416	175	23.1	146	69.1	63.2
Inorganics									
Free Cyanide	N	ug/l	5	< 5	< 5	< 5	< 5	< 5	< 5
Hexavalent Chromium (Dissolved)	N	ug/l	0.5	< 0.5	≤ 1.0	≤ 1.2	≤ 0.6	≤ 2.4	< 0.5
Total Cyanide	U	ug/l	5	6	< 5	< 5	< 5	< 5	< 5
Miscellaneous									
Dissolved organic carbon	N	mg/l	1.5	3.3	11	2.2	2.7	3.0	3.5
pH	U	pH units	0.1	6.7	7.3	8.3	7.4	7.4	7.0
Suspended Solids	N	mg/l	0.1	26	120	8.0	24	12	74
Total Organic Carbon	N	mg/l	0.9	3	18	2	3	3	4

Tests marked N are not UKAS accredited.

The Environmental Laboratory Ltd. Reg. No. 3882193



Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference	272020	272021	272022	272023	272024	272025
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)	3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022

Determinand	Codes	Units	LOD						
Phenols									
Phenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
M,P-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
O-Cresol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Polyaromatic hydrocarbons									
Naphthalene GCMS	N	ug/l	0.01	0.01	0.02	0.02	0.01	0.02	0.01
Acenaphthylene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene GCMS	N	ug/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene GCMS	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene GCMS	N	ug/l	0.01	0.02	0.06	0.01	< 0.01	0.02	0.05
Anthracene GCMS	N	ug/l	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.01
Fluoranthene GCMS	N	ug/l	0.01	0.02	0.06	< 0.01	< 0.01	0.02	0.12
Pyrene GCMS	N	ug/l	0.01	0.02	0.06	< 0.01	< 0.01	0.02	0.13
Benzo (a) anthracene GCMS	N	ug/l	0.01	0.02	0.03	< 0.01	< 0.01	< 0.01	0.06
Chrysene GCMS	N	ug/l	0.01	0.02	0.04	< 0.01	< 0.01	0.01	0.07
Benzo (b) fluoranthene GCMS	N	ug/l	0.01	0.04	0.33	< 0.01	< 0.01	< 0.01	0.16
Benzo (k) fluoranthene GCMS	N	ug/l	0.01	0.03	0.26	< 0.01	< 0.01	< 0.01	0.42
Benzo (a) pyrene GCMS	N	ug/l	0.01	0.04	0.03	< 0.01	< 0.01	0.01	0.09
Indeno (1,2,3-cd) pyrene GCMS	N	ug/l	0.01	0.08	0.02	0.01	0.02	< 0.01	0.05
Dibenzo(a,h)anthracene GCMS	N	ug/l	0.01	0.08	< 0.01	< 0.01	0.01	< 0.01	0.02
Benzo(ghi)perylene GCMS	N	ug/l	0.01	0.08	0.03	< 0.01	< 0.01	< 0.01	0.06
Total PAH(16) GCMS	N	ug/l	0.01	0.48	0.98	0.13	0.09	0.15	1.26

Tests marked N are not UKAS accredited.

The Environmental Laboratory Ltd. Reg. No. 3882193



Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference	272020	272021	272022	272023	272024	272025
Customer Reference						
Sample ID						
Sample Type	WATER	WATER	WATER	WATER	WATER	WATER
Sample Location	RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)	3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022

Determinand	Codes	Units	LOD						
BTEX									
Benzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Toluene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Ethylbenzene	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Xylenes	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
MTBE	U	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
TPH CWG									
>C5-C6 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	7.8	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	5.5	76.4	< 5.0	17.6	< 5.0	6.2
>C35-C40 Aliphatic (EH_CU_1D_AL)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aliphatic (HS_1D_MS+EH_CU_1D_AL)	N	ug/l	5	13.2	76.4	< 5.0	17.6	< 5.0	6.2
>C5-C7 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic (HS_1D_MS)	N	ug/l	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C10-C12 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C12-C16 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
>C16-C21 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	5.6	< 5.0	< 5.0	< 5.0	< 5.0
>C21-C35 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	69.8	< 5.0	8.3	< 5.0	< 5.0
>C35-C40 Aromatic (EH_CU_1D_AR)	N	ug/l	5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total (>C5-C40) Aromatic (HS_1D_MS+EH_CU_1D_AR)	N	ug/l	5	< 5.0	75.4	< 5.0	8.3	< 5.0	< 5.0
Total (>C5-C40) Alii/Aro (HS_1D_MS+EH_CU_1D_Total)	N	ug/l	5	13.2	152	< 5.0	25.9	< 5.0	6.2

Tests marked N are not UKAS accredited.

The Environmental Laboratory Ltd. Reg. No. 3882193

Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference				272020	272021	272022	272023	272024	272025
Customer Reference									
Sample ID									
Sample Type				WATER	WATER	WATER	WATER	WATER	WATER
Sample Location				RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)				3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date				15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022
Determinand	Codes	Units	LOD						
VOC									
MTBE	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Heptane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Octane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Nonane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Benzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
m+p-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
o-xylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-dichloroethene	N	ug/l	1	8	< 1	< 1	< 1	2	1
1,1-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroform	N	ug/l	1	< 1	< 1	8	2	< 1	< 1
Tetrachloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethylene	N	ug/l	1	27	< 1	< 1	< 1	1	< 1
Tetrachloroethylene	N	ug/l	1	79	< 1	< 1	< 1	13	< 1
1,1,1,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Methylethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Trans - 1-2 -dichloroethylene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloro-1-propene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromochloromethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromoethane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Propylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
2-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
4-Chlorotoluene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
t-butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trimethylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-methylpropylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
p-cymene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Butylbenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromo-3-chloropropane	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Hexachlorobutadiene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-3 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1-2-4 - Trichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	N	ug/l	1	< 1	< 1	< 1	< 1	< 1	< 1

Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference				272020	272021	272022	272023	272024	272025
Customer Reference									
Sample ID									
Sample Type				WATER	WATER	WATER	WATER	WATER	WATER
Sample Location				RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)				3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date				15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022
Determinand	Codes	Units	LOD						
SVOC									
Phenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Aniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Chlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzyl Alcohol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,2-Dichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroisopropyl)ether	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3 and 4-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
N-Nitrosodi-n-propylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloroethane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Nitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Isophorone	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dimethylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis(2-chloroethoxy)methane	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4-Dichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,3,5-Trichlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Naphthalene	N	ug/l	0.01	0.01	0.02	0.02	0.01	0.02	0.01
3-Chloroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachloro-1,3-butadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
4-Chloro-3-methylphenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Methylnaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorocyclopentadiene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,6-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,4,5-Trichlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-Chloronaphthalene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1,4-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dimethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-3-dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2-6-dinitrotoluene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthylene	N	ug/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
1,2-Dinitrobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
3-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Acenaphthene	N	ug/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
4-nitrophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibenzofuran	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,5,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
2,3,4,6-Tetrachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diethyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-chloro-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluorene	N	ug/l	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitroaniline	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dinitro-o-cresol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diphenylamine	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Azobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
1-bromo-4-phenoxybenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Hexachlorobenzene	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Pentachlorophenol	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 22-39468, issue number 2

ELAB Reference				272020	272021	272022	272023	272024	272025
Customer Reference									
Sample ID									
Sample Type				WATER	WATER	WATER	WATER	WATER	WATER
Sample Location				RB103	RB104	RB105	RB106	WS09A	WS13
Sample Depth (m)				3.32	2.12	2.17	2.10	3.41	3.41
Sampling Date				15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022	15/03/2022
Determinand	Codes	Units	LOD						
SVOC									
Phenanthrene	N	ug/l	0.01	0.02	0.06	0.01	< 0.01	0.02	0.05
Anthracene	N	ug/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.01
Carbazole	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Dibutyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Fluoranthene	N	ug/l	0.01	0.02	0.06	< 0.01	< 0.01	0.02	0.15
Pyrene	N	ug/l	0.01	0.03	0.06	< 0.01	< 0.01	0.02	0.16
Butyl benzyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Bis-2-ethylhexyladipate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Diisooctyl phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(a)anthracene	N	ug/l	0.01	0.03	0.04	< 0.01	< 0.01	< 0.01	0.08
Chrysene	N	ug/l	0.01	0.03	0.04	< 0.01	< 0.01	0.01	0.10
Bis(2-ethylhexyl)phthalate	N	ug/l	1	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
Benzo(b)fluoranthene	N	ug/l	0.01	0.05	0.03	0.01	< 0.01	< 0.01	0.08
Benzo(k)fluoranthene	N	ug/l	0.01	0.05	0.03	0.01	< 0.01	0.01	0.08
Benzo(a)pyrene	N	ug/l	0.01	0.04	0.03	< 0.01	< 0.01	< 0.01	0.10
Indeno(1,2,3-CD)pyrene	N	ug/l	0.01	0.08	0.02	< 0.01	0.02	< 0.01	0.05
Dibenzo(a,h)anthracene	N	ug/l	0.01	0.09	< 0.01	< 0.01	0.01	< 0.01	0.02
Benzo(ghi)perylene	N	ug/l	0.01	0.09	0.03	0.01	0.01	0.01	0.06

Method Summary

Report No.: 22-39468, issue number 2

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Water					
Aliphatic/Aromatic hydrocarbons in water	N		25/03/2022		GC-FID
Phenols in waters	N		23/03/2022		HPLC
Dissolved metals by ICP in waters	U		23/03/2022	101	ICPMS
Dissolved organic carbon	N		24/03/2022	102	IR
pH of waters	U		23/03/2022	113	Electromeric
Chromium Hexavalent in waters	N		25/03/2022	123	Colorimetry
Cyanide in waters	U		23/03/2022	132	Colorimetry
PAHs and/or PCBs in waters	N		24/03/2022	135	GC-MS
Suspended Solids in waters	N		28/03/2022	155	Gravimetry
SVOC in waters	N		24/03/2022	167	GC-MS
BTEX in waters	U		23/03/2022	200	GC-MS
Low range Aliphatic hydrocarbons water	N		23/03/2022	200	GC-MS
Low range Aromatic hydrocarbons water	N		23/03/2022	200	GC-MS
VOC in waters	N		22/03/2022	200	GC-MS
Cyanide in waters	U		23/03/2022	205	Colorimetry
Aliphatic hydrocarbons in water	N		24/03/2022	215	GC-FID
Aromatic hydrocarbons in water	N		24/03/2022	215	GC-FID
Anions	U		23/03/2022	270	Ion Chromatography
Dissolved metals by ICP in waters	U		23/03/2022	301	ICPMS
Total metals by ICP	U		29/03/2022	301	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-39468, issue number 2

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry



A2 Site Investigation

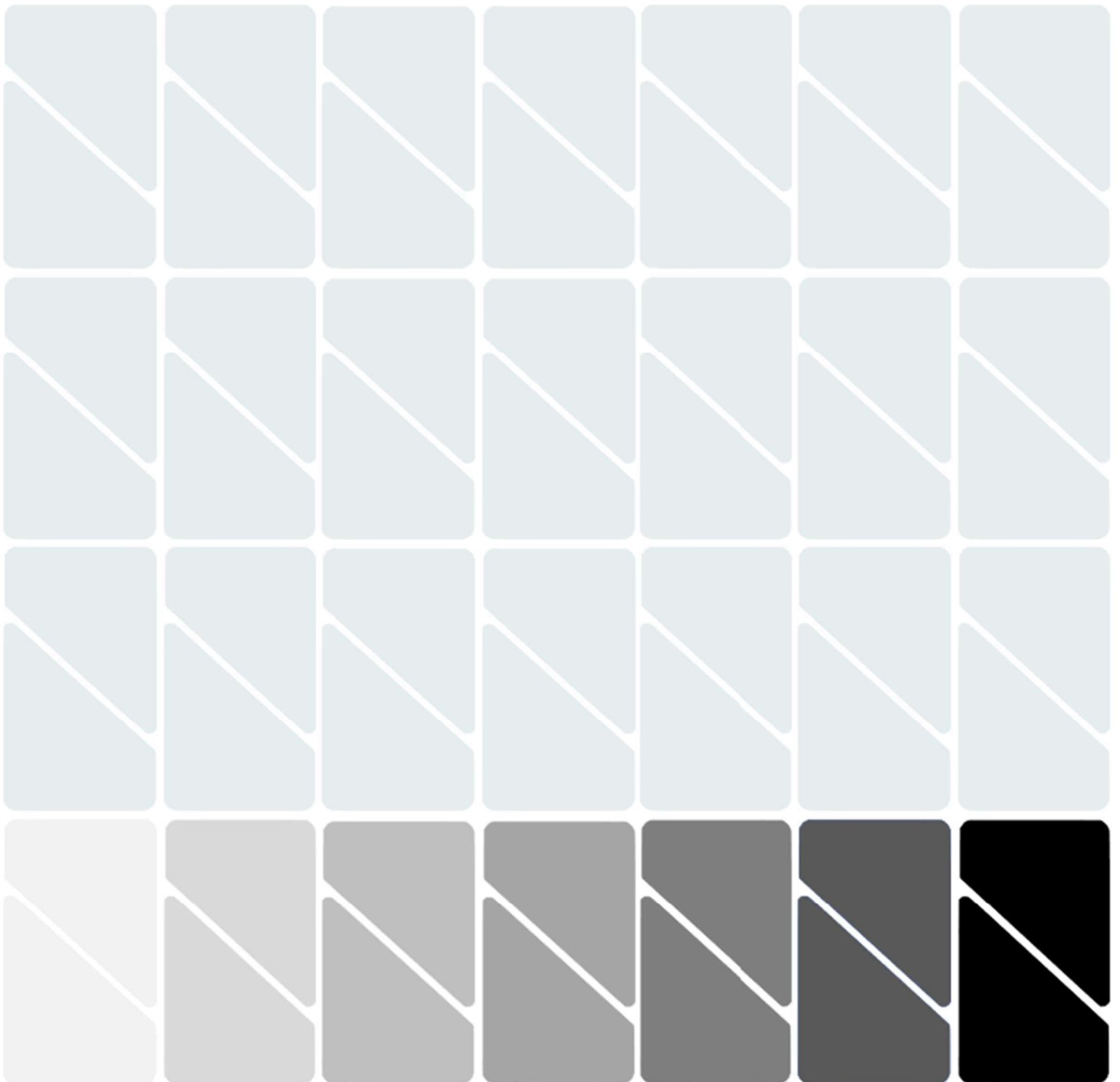
A2 Site Investigation Limited

One Westminster Bridge Rd
London, SE1 7XW

020 7021 0396

info@a2-si.com

www.a2-si.com





Appendix C: GQRA Screening Tables (Excluding Deansgate Level)

1602 - Renaissance Manchester Supplementary

Exceedance of the GAC

GAC - Generic Assessment Criteria

[illegible]

As0681	
As0682	
As0683	
As0684	
As0685	
As0686	
As0687	
As0688	
As0689	
As0690	
As0691	
As0692	
As0693	
As0694	
As0695	
As0696	
As0697	
As0698	
As0699	
As0700	
As0701	
As0702	
As0703	
As0704	
As0705	
As0706	
As0707	
As0708	
As0709	
As0710	
As0711	
As0712	
As0713	
As0714	
As0715	
As0716	
As0717	
As0718	
As0719	
As0720	
As0721	
As0722	
As0723	
As0724	
As0725	
As0726	
As0727	
As0728	
As0729	
As0730	
As0731	
As0732	
As0733	
As0734	
As0735	
As0736	
As0737	
As0738	
As0739	
As0740	
As0741	
As0742	
As0743	
As0744	
As0745	
As0746	
As0747	
As0748	
As0749	
As0750	
As0751	
As0752	
As0753	
As0754	
As0755	
As0756	
As0757	
As0758	
As0759	
As0760	
As0761	
As0762	
As0763	
As0764	
As0765	
As0766	
As0767	
As0768	
As0769	
As0770	
As0771	
As0772	
As0773	
As0774	
As0775	
As0776	
As0777	
As0778	
As0779	
As0780	
As0781	
As0782	
As0783	
As0784	
As0785	
As0786	
As0787	
As0788	
As0789	
As0790	
As0791	
As0792	
As0793	
As0794	
As0795	
As0796	
As0797	
As0798	
As0799	
As0800	
As0801	
As0802	
As0803	
As0804	
As0805	
As0806	
As0807	
As0808	
As0809	
As0810	
As0811	
As0812	
As0813	
As0814	
As0815	
As0816	
As0817	
As0818	
As0819	
As0820	
As0821	
As0822	
As0823	
As0824	
As0825	
As0826	
As0827	
As0828	
As0829	
As0830	
As0831	
As0832	
As0833	
As0834	
As0835	
As0836	
As0837	
As0838	
As0839	
As0840	
As0841	
As0842	
As0843	
As0844	
As0845	
As0846	
As0847	
As0848	
As0849	
As0850	
As0851	
As0852	
As0853	
As0854	
As0855	
As0856	
As0857	
As0858	

Heavy Metals and Metalloids																								
Asenic (arsen) regia extractabile	mg/kg	40	640	DEFRA C8SL	-	-	-	-	-	-	1.7	3.2	2.2	1.9	9.8	3.2	2.8	3.2	3.2	3.5	1.8	1.9	1.9	
Cadmium (cadm) regia extractabile	mg/kg	150	110	LOM SALS	-	-	-	-	-	-	<0.2	0.3	<0.2	0.3	<0.2	0.9	<0.2	<0.2	0.4	<0.2	0.4	0.3	0.3	
Chromium (chrom) regia extractabile	mg/kg	21	9800	DEFRA C8SL	-	-	-	-	-	-	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
Chromium (chrom) regia extractabile	mg/kg	916	916	LOM SALS	-	-	-	-	-	-	4	4	4	4	4	4	4	4	4	4	4	4	4	
Copper (cupr) regia extractabile	mg/kg	7100	68000	LOM SALS	-	-	-	-	-	-	15	20	30	20	20	11	12	13	22	27	19	13	12	
Cadmium (cadm) regia extractabile	mg/kg	310	2300	DEFRA C8SL	-	-	-	-	-	-	8.8	8.8	10	10	10	2.0	1.9	2.8	1.9	4.1	7.1	1.2	1.2	
Mercury (mercur) regia extractabile	mg/kg	15	200	LOM SALS	-	-	-	-	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	
Nickel (nick) regia extractabile	mg/kg	180	980	LOM SALS	-	-	-	-	-	-	5.9	9.5	7.4	11	7.7	7.8	9.5	8.6	9	9.2	8.6	6	5.5	
Lead (plumb) regia extractabile	mg/kg	40	100	LOM SALS	-	-	-	-	-	-	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	<0.9	
Zinc (zinc) regia extractabile	mg/kg	40000	730000	LOM SALS	-	-	-	-	-	-	31	84	30	35	31	16	16	16	32	34	26	23	21	

Naphthalene

[illegible]

→C8-C10 A

[illegible]

	Benzene
	Toluene

Page 2 of 2

Human Health Generic Quantitative Assessment for Groundwater

1602 - Renaissance Manchester Supplementary

Key:	
	Exceedance of the residential GAC
	Exceedance of the commercial GAC
	GAC - Generic Assessment Criteria

Laboratory Report Ref.	Units	GAC	272020	1835881	272021	1835882	272022	272023	272024	272025	1835880
Exploratory Location Ref.			RB103	RB 104	RB104	RB 105	RB105	RB106	WS09	WS13	RB 101
Sample Date			15/03/2022	13/04/2021	15/03/2022	13/04/2021	15/03/2022	15/03/2022	15/03/2022	15/03/2022	13/04/2021
Aquifer Unit			Chester Formation	Chester Formation	Chester Formation	Chester Formation	Chester Formation	Chester Formation	MG	MG	Chester Formation

		Residential	Commercial								
Miscellaneous											
Dissolved organic carbon	mg/l	-	3.3	6.01	11	0.97	2.2	2.7	3.0	3.5	0.80
pH	pH units	-	6.7	10.2	7.3	10.0	8.3	7.4	7.4	7.0	7.3
Suspended Solids	mg/l	-	26	-	120	-	8.0	24	12	74	-
Total Organic Carbon	mg/l	-	3	-	18	-	2	3	3	4	-

Anions and Other											
Sulphate	mg/l	-	-	416	-	175	-	23.1	146	69.1	63.2
Free Cyanide	ug/l	-	-	< 5	-	< 5	-	< 5	< 5	< 5	< 5
Hexavalent Chromium (Dissolved)	ug/l	-	-	<0.5	-	≤ 1.0	-	≤ 1.2	≤ 0.6	≤ 2.4	<0.5
Total Cyanide	ug/l	-	-	6	< 1.0	< 5	< 1.0	< 5	< 5	< 5	< 1.0

Heavy Metals and Metalloids											
Arsenic	ug/l	-	-	< 0.5	2.93	3.0	1.18	0.6	< 0.5	2.3	1.8
Boron	ug/l	-	-	206	-	111	-	45	13	83	87
Barium	ug/l	-	-	38	-	90	-	41	191	38	80
Beryllium	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1
Cadmium	ug/l	-	-	< 0.5	0.03	< 0.5	< 0.02	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	ug/l	-	-	< 0.5	3.8	1.0	1.6	1.2	0.6	2.4	< 0.5
Chromium (III)	ug/l	-	-	<0.5	3.8	≤ 1.0	1.6	≤ 1.2	≤ 0.6	≤ 2.4	<0.5
Copper	ug/l	-	-	0.6	8.4	7.4	2.9	< 0.5	0.5	3.4	2.9
Mercury	ug/l	-	-	< 0.05	1.22	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05
Molybdenum	ug/l	-	-	< 1	-	6	-	< 1	< 1	7	4
Nickel	ug/l	-	-	2.1	2.1	8.3	0.5	< 0.5	1.8	1.2	2.3
Lead	ug/l	-	-	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5	< 0.5	< 0.5	2.1
Selenium	ug/l	-	-	< 1	2.8	4	2.2	< 1	2	2	< 1
Vanadium	ug/l	-	-	< 0.5	-	7.0	-	< 0.5	< 0.5	1.6	< 0.5
Zinc	ug/l	-	-	10.9	2.7	23.3	2.2	< 1.2	16.8	3.0	13.8

PAHs											
Naphthalene GCMS	ug/l	200	23000	0.01	-	0.02	-	0.02	0.01	0.02	0.01

Acenaphthylene GCMS	ug/l	220000	20000000	< 0.01	-	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Acenaphthene GCMS	ug/l	170000	15000000	< 0.01	-	0.02	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Fluorene GCMS	ug/l	210000	18000000	< 0.01	-	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Phenanthrene GCMS	ug/l	-	-	0.02	-	0.06	-	0.01	< 0.01	0.02	0.05	-
Anthracene GCMS	ug/l	-	-	< 0.01	-	0.01	-	< 0.01	< 0.01	< 0.01	0.01	-
Fluoranthene GCMS	ug/l	-	-	0.02	-	0.06	-	< 0.01	< 0.01	0.02	0.12	-
Pyrene GCMS	ug/l	-	-	0.02	-	0.06	-	< 0.01	< 0.01	0.02	0.13	-
Benzo (a) anthracene GCMS	ug/l	-	-	0.02	-	0.03	-	< 0.01	< 0.01	< 0.01	0.06	-
Chrysene GCMS	ug/l	-	-	0.02	-	0.04	-	< 0.01	< 0.01	0.01	0.07	-
Benzo (b) fluoranthene GCMS	ug/l	-	-	0.04	-	0.33	-	< 0.01	< 0.01	< 0.01	0.16	-
Benzo (k) fluoranthene GCMS	ug/l	-	-	0.03	-	0.26	-	< 0.01	< 0.01	< 0.01	0.42	-
Benzo (a) pyrene GCMS	ug/l	-	-	0.04	-	0.03	-	< 0.01	< 0.01	0.01	0.09	-
Indeno (1,2,3-cd) pyrene GCMS	ug/l	-	-	0.08	-	0.02	-	0.01	0.02	< 0.01	0.05	-
Dibenzo(a,h)anthracene GCMS	ug/l	-	-	0.08	-	< 0.01	-	< 0.01	0.01	< 0.01	0.02	-
Benzo(ghi)perylene GCMS	ug/l	-	-	0.08	-	0.03	-	< 0.01	< 0.01	< 0.01	0.06	-
Total PAH(16) GCMS	ug/l	-	-	0.48	-	0.98	-	0.13	0.09	0.15	1.26	-

TPH

>C5-C6 Aliphatic	ug/l	1900	190000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C6-C8 Aliphatic	ug/l	1500	150000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	ug/l	57	5700	7.8	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0
>C10-C12 Aliphatic	ug/l	37	3600	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C12-C16 Aliphatic	ug/l	-	-	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C16-C21 Aliphatic	ug/l	-	-	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C21-C35 Aliphatic	ug/l	-	-	5.5	< 10	76.4	< 10	< 5.0	17.6	< 5.0	6.2	< 10
>C35-C40 Aliphatic	ug/l	-	-	< 5.0	-	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-
Total (>C5-35) Aliphatic	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Total (>C5-C40) Aliphatic	ug/l	-	-	13.2	-	76.4	-	< 5.0	17.6	< 5.0	6.2	-
>C5-C7 Aromatic	ug/l	210000	20000000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C7-C8 Aromatic	ug/l	220000	21000000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	ug/l	1900	190000	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C10-C12 Aromatic	ug/l	6800	660000	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C12-C16 Aromatic	ug/l	39000	3700000	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C16-C21 Aromatic	ug/l	-	-	< 5.0	< 10	5.6	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C21-C35 Aromatic	ug/l	-	-	< 5.0	< 10	69.8	< 10	< 5.0	8.3	< 5.0	< 5.0	< 10
>C35-C40 Aromatic	ug/l	-	-	< 5.0	-	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-
Total (>C5-C35) Aromatic	ug/l	-	-	-	< 10	-	< 10	-	-	-	-	< 10
Total (>C5-C40) Aromatic	ug/l	-	-	< 5.0	-	75.4	-	< 5.0	8.3	< 5.0	< 5.0	-
Total (>C5-C40) Ali/Aro	ug/l	-	-	13.2	< 10	152	< 10	< 5.0	25.9	< 5.0	6.2	< 10

BTEX and MTBE

Benzene	ug/l	210	20000	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0
Toluene	ug/l	230000	21000000	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0
Ethylbenzene	ug/l	10000	960000	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0

Xylenes	ug/l	9500	940000	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
p & m-xylene	µg/l	9500	940000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
o-xylene	µg/l	12,000	1,100,000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
MTBE	ug/l	83000	7800000	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0

VOC

MTBE	ug/l	83,000	7800000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Heptane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Octane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Nonane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Benzene	ug/l	210	20000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Toluene	ug/l	230,000	21000000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Ethylbenzene	ug/l	10,000	960000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
m+p-xylene	ug/l	9,500	1,920,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
o-xylene	ug/l	12,000	1,100,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
cis-1,2-dichloroethene	ug/l	130	13000	8	< 1.0	< 1	< 1.0	< 1	< 1	2	1	< 1.0
1,1-Dichloroethane	ug/l	2,700	260,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Chloroform	ug/l	790	85000	< 1	8.6	< 1	7.9	8	2	< 1	< 1	18.8
Tetrachloromethane	ug/l	5.3	770	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,1-Trichloroethane	ug/l	3,000	290,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Trichloroethylene	ug/l	5.7	530	27	< 1.0	< 1	< 1.0	< 1	< 1	1	< 1	< 1.0
Tetrachloroethylene	ug/l	34	4,600	79	< 1.0	< 1	< 1.0	< 1	< 1	13	< 1	< 1.0
1,1,1,2-Tetrachloroethane	ug/l	240	22,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,2,2-Tetrachloroethane	ug/l	1,600	150,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Chlorobenzene	ug/l	98	15,000	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Bromobenzene	ug/l	220	20,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromodichloromethane	ug/l	17	1,600	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Methylethylbenzene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,1-Dichloro-1-propene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Trans - 1-2 -dichloroethylene	ug/l	160	16,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
2,2-Dichloropropane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromochloromethane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,2-Dichloroethane	ug/l	8.9	2,600	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromomethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2-Dichloropropane	ug/l	22	2,600	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
cis-1,3-Dichloro-1-propene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
trans-1,3-Dichloro-1-propene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,2-Trichloroethane	ug/l	520	49,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromochloromethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,3-Dichloropropane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromoethane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Styrene	ug/l	8,800	810,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Propylbenzene	ug/l	2,700	240,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
2-Chlorotoluene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2,4-Trimethylbenzene	ug/l	24	2,200	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
4-Chlorotoluene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
t-butylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,3,5-Trimethylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1-methylpropylbenzene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
p-cymene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,3-Dichlorobenzene	ug/l	31	2,800	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0

Butylbenzene	ug/l	-		< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,2-Dibromo-3-chloropropane	ug/l	-		< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Hexachlorobutadiene	ug/l	1.7	230	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1-2-3 - Trichlorobenzene	ug/l	35	3,100	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Naphthalene	ug/l	220	23,000	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1-2-4 - Trichlorobenzene	ug/l	68	7,200	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,4-Dichlorobenzene	ug/l	5,000	460,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2-Dichlorobenzene	ug/l	2,000	220,000	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromoform	ug/l	3,100	400,000	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Vinyl Chloride	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,2-Dichloropropane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1-Dichloropropene	ug/l	22	2600	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Isopropylbenzene	ug/l	850	86,000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
sec-Butylbenzene	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
p-Isopropyltoluene	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Butylbenzene	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Chloromethane	ug/l	14	1400	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Chloroethane	ug/l	10000	1000000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Bromomethane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Trichlorofluoromethane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1-Dichloroethene	ug/l	160	16000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1-Dichloropropene	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,2-Dibromoethane	ug/l	-		-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Chlorobenzene	ug/l	98	15000	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0

SVOC

Phenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Aniline	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Bis(2-chloroethyl)ether	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2-Chlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,3-Dichlorobenzene	ug/l	31	2800	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1,4-Dichlorobenzene	ug/l	5,000	460,000	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Benzyl Alcohol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,2-Dichlorobenzene	ug/l	2,000	220,000	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2-Methylphenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Bis(2-chloroisopropyl)ether	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
3 and 4-methylphenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
N-Nitrosodi-n-propylamine	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachloroethane	ug/l	8.5	740	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Nitrobenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Isophorone	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2-Nitrophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,4-Dimethylphenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Bis(2-chloroethoxy)methane	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,4-Dichlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,3,5-Trichlorobenzene	ug/l	7.4	660	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Naphthalene	ug/l	220	23000	0.01	< 0.01	0.02	< 0.01	0.02	0.01	0.02	0.01	< 0.01
3-Chloroaniline	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachloro-1,3-butadiene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
4-Chloro-3-methylphenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-

2-Methynaphthalene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1-Methylnaphthalene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachlorocyclopentadiene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,4,6-Trichlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,4,5-Trichlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1-Chloronaphthalene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2-Nitroaniline	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,4-Dinitrobenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dimethyl phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1-3-dinitrobenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2-6-dinitrotoluene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Acenaphthylene	ug/l	220,000	20,000,000	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
1,2-Dinitrobenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
3-Nitroaniline	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Acenaphthene	ug/l	-		< 0.01	-	0.02	-	< 0.01	< 0.01	< 0.01	< 0.01	-
4-nitrophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dibenzofuran	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,3,5,6-Tetrachlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,3,4,6-Tetrachlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Diethyl phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1-chloro-4-phenoxybenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Fluorene	ug/l	210,000	18,000,000	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitroaniline	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dinitro-o-cresol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Diphenylamine	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Azobenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1-bromo-4-phenoxybenzene	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachlorobenzene	ug/l	16	1400	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Pentachlorophenol	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Phenanthrene	ug/l	-		0.02	-	0.06	-	0.01	< 0.01	0.02	0.05	-
Anthracene	ug/l	-		< 0.01	-	0.02	-	< 0.01	< 0.01	< 0.01	0.01	-
Carbazole	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dibutyl phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Fluoranthene	ug/l	-		0.02	-	0.06	-	< 0.01	< 0.01	0.02	0.15	-
Pyrene	ug/l	-		0.03	-	0.06	-	< 0.01	< 0.01	0.02	0.16	-
Butyl benzyl phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Bis-2-ethylhexyladipate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Diisooctyl phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Benzo(a)anthracene	ug/l	-		0.03	-	0.04	-	< 0.01	< 0.01	< 0.01	0.08	-
Chrysene	ug/l	-		0.03	-	0.04	-	< 0.01	< 0.01	0.01	0.10	-
Bis(2-ethylhexyl)phthalate	ug/l	-		< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Benzo(b)fluoranthene	ug/l	-		0.05	-	0.03	-	0.01	< 0.01	< 0.01	0.08	-
Benzo(k)fluoranthene	ug/l	-		0.05	-	0.03	-	0.01	< 0.01	0.01	0.08	-
Benzo(a)pyrene	ug/l	-		0.04	-	0.03	-	< 0.01	< 0.01	< 0.01	0.10	-
Indeno(1,2,3-CD)pyrene	ug/l	-		0.08	-	0.02	-	< 0.01	0.02	< 0.01	0.05	-
Dibenzo(a,h)anthracene	ug/l	-		0.09	-	< 0.01	-	< 0.01	0.01	< 0.01	0.02	-
Benzo(ghi)perylene	ug/l	-		0.09	-	0.03	-	0.01	0.01	0.01	0.06	-

Phenolics

Phenol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
M,P-Cresol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
O-Cresol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
3,4-Dimethylphenol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
2,3-Dimethylphenol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
2,3,5-trimethylphenol	ug/l	-		1	-	< 1	-	< 1	< 1	< 1	< 1	-
Total Monohydric Phenols	ug/l	-		1	4.8	< 1	3.4	< 1	< 1	< 1	< 1	4.8

Controlled Waters Generic Quantitative Assessment for Groundwater

1602 - Renaissance Manchester Supplementary

Key:	
	Exceedance of the Drinking Water GAC
	Exceedance of Environmental Quality GAC
	Exceedance of both GAC
GAC - Generic Assessment Criteria	

Laboratory Report Ref.	Units	Drinking Water GAC	Environmental Quality GAC	272020	1835881	272021	1835882	272022	272023	272024	272025	1835880	
Exploratory Location Ref.				RB103	RB 104	RB104	RB 105	RB105	RB106	WS09A	WS13	RB 101	
Sample Date				15/03/2022	13/04/2021	15/03/2022	13/04/2021	15/03/2022	15/03/2022	15/03/2022	15/03/2022	13/04/2021	
Aquifer Unit				Chester Formation	Chester Formation	Chester Formation	Chester Formation	Chester Formation	Chester Formation	Chester Formation	MG	MG	Chester Formation
GAC Refs.				UK and EU Drinking Water Standards and WHO Guideline Values		Environmental Quality Standards (EQS) published by the UK, EU and EA							

Miscellaneous												
Dissolved organic carbon	mg/l	-	-	3.3	6.01	11	0.97	2.2	2.7	3.0	3.5	0.80
pH	pH units	-	-	6.7	10.2	7.3	10.0	8.3	7.4	7.4	7.0	7.3
Suspended Solids	mg/l	-	-	26	-	120	-	8.0	24	12	74	-
Total Organic Carbon	mg/l	-	-	3	-	18	-	2	3	3	4	-

Anions and Other												
Sulphate	mg/l	250	400	416	-	175	-	23.1	146	69.1	63.2	-
Free Cyanide	ug/l	-	1	< 5	-	< 5	-	< 5	< 5	< 5	< 5	-
Hexavalent Chromium (Dissolved)	ug/l	-	3.4	< 0.5	< 5.0	≤ 1.0	< 5.0	≤ 1.2	≤ 0.6	≤ 2.4	< 0.5	< 5.0
Total Cyanide	ug/l	50	-	6	< 1.0	< 5	< 1.0	< 5	< 5	< 5	< 5	< 1.0

Heavy Metals and Metalloids												
Arsenic	ug/l	10	50	< 0.5	2.93	3.0	1.18	0.6	< 0.5	2.3	1.8	0.39
Boron	ug/l	1000	2000	206	-	111	-	45	13	83	87	-
Barium	ug/l	700	-	38	-	90	-	41	191	38	80	-
Beryllium	ug/l	12	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Cadmium	ug/l	5	0.08	< 0.5	0.03	< 0.5	< 0.02	< 0.5	< 0.5	< 0.5	< 0.5	< 0.02
Chromium	ug/l	50	4.7	< 0.5	3.8	1.0	1.6	1.2	0.6	2.4	< 0.5	1.2
Chromium (III)	ug/l	50	4.7	< 0.5	3.8	≤ 1.0	1.6	≤ 1.2	≤ 0.6	≤ 2.4	< 0.5	1.2
Copper	ug/l	2000	1	0.6	8.4	7.4	2.9	< 0.5	0.5	3.4	2.9	3.1
Mercury	ug/l	1	-	< 0.05	1.22	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Molybdenum	ug/l	-	-	< 1	-	6	-	< 1	< 1	7	4	-
Nickel	ug/l	20	4	2.1	2.1	8.3	0.5	< 0.5	1.8	1.2	2.3	1.2
Lead	ug/l	10	1.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5	< 0.5	< 0.5	2.1	0.2
Selenium	ug/l	10	-	< 1	2.8	4	2.2	< 1	2	2	< 1	< 0.6
Vanadium	ug/l	-	20	< 0.5	-	7.0	-	< 0.5	< 0.5	1.6	< 0.5	-
Zinc	ug/l	3,000	10.9	10.9	2.7	23.3	2.2	< 1.2	16.8	3.0	13.8	7.8

PAHs												
Naphthalene GCMS	ug/l	-	2	0.01	-	0.02	-	0.02	0.01	0.02	0.01	-
Acenaphthylene GCMS	ug/l	-	-	< 0.01	-	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Acenaphthene GCMS	ug/l	-	-	< 0.01	-	0.02	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Fluorene GCMS	ug/l	-	-	< 0.01	-	< 0.01	-	< 0.01	< 0.01	< 0.01	< 0.01	-
Phenanthrene GCMS	ug/l	-	-	0.02	-	0.06	-	0.01	< 0.01	0.02	0.05	-
Anthracene GCMS	ug/l	-	0.1	< 0.01	-	0.01	-	< 0.01	< 0.01	< 0.01	0.01	-
Fluoranthene GCMS	ug/l	-	0.0063	0.02	-	0.06	-	< 0.01	< 0.01	0.02	0.12	-
Pyrene GCMS	ug/l	-	-	0.02	-	0.06	-	< 0.01	< 0.01	0.02	0.13	-
Benzo (a) anthracene GCMS	ug/l	-	-	0.02	-	0.03	-	< 0.01	< 0.01	< 0.01	0.06	-
Chrysene GCMS	ug/l	-	-	0.02	-	0.04	-	< 0.01	< 0.01	0.01	0.07	-
Benzo (b) fluoranthene GCMS	ug/l	-	-	0.04	-	0.33	-	< 0.01	< 0.01	< 0.01	0.16	-
Benzo (k) fluoranthene GCMS	ug/l	-	-	0.03	-	0.26	-	< 0.01	< 0.01	< 0.01	0.42	-
Benzo(ghi)perylene GCMS	ug/l	-	-	0.08	-	0.03	-	< 0.01	< 0.01	< 0.01	0.06	-
Indeno (1,2,3-cd) pyrene GCMS	ug/l	-	-	0.08	-	0.02	-	0.01	0.02	< 0.01	0.05	-
Dibenzo(a,h)anthracene GCMS	ug/l	-	-	0.08	-	< 0.01	-	< 0.01	0.01	< 0.01	0.02	-
Benzo (a) pyrene GCMS	ug/l	0.01	0.0002	0.04	-	0.63	-	< 0.01	< 0.01	0.01	0.08	-
Total PAH(16) GCMS	ug/l	-	-	0.48	-	0.98	-	0.13	0.09	0.15	1.26	-

TPH												
>C5-C6 Aliphatic	ug/l	300	20	< 1.0	< 10	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 10
>C6-C8 Aliphatic	ug/l	300	20	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aliphatic	ug/l	300	20	7.8	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0
>C10-C12 Aliphatic	ug/l	300	20	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0
>C12-C16 Aliphatic	ug/l	300	20	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C16-C21 Aliphatic	ug/l	Insoluble	Insoluble	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C21-C35 Aliphatic	ug/l	Insoluble	Insoluble	5.5	< 10	76.4	< 10	< 5.0	17.6	< 5.0	6.2	< 10
>C35-C40 Aliphatic	ug/l	Insoluble	Insoluble	< 5.0	-	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-
Total (>C5-C35) Aliphatic	ug/l	-	-	-	< 10	-	< 10	-	-	-	-	< 10
Total (>C5-C40) Aliphatic	ug/l	-	-	13.2	-	76.4	-	< 5.0	17.6	< 5.0	6.2	-
>C5-C7 Aromatic	ug/l	1	10	< 1.0	< 10	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 10
>C7-C8 Aromatic	ug/l	700	74	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
>C8-C10 Aromatic	ug/l	300	20	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0
>C10-C12 Aromatic	ug/l	90	20	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0
>C12-C16 Aromatic	ug/l	90	20	< 5.0	< 10	< 5.0	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C16-C21 Aromatic	ug/l	90	20	< 5.0	< 10	5.6	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 10
>C21-C35 Aromatic	ug/l	90	20	< 5.0	< 10	69.8	< 10	< 5.0	8.3	< 5.0	< 5.0	< 10
>C35-C40 Aromatic	ug/l	-	20	< 5.0	-	< 5.0	-	< 5.0	< 5.0	< 5.0	< 5.0	-
Total (>C5-C35) Aromatic	ug/l	-	-	-	< 10	-	< 10	-	-	-	-	< 10
Total (>C5-C40) Aromatic	ug/l	-	-	< 5.0	-	75.4	-	< 5.0	8.3	< 5.0	< 5.0	-
Total (>C5-C40) Al/Aro	ug/l	-	-	13.2	-	152	-	< 5.0	25.9	< 5.0	6.2	-

BTEX and MTBE

Benzene	ug/l	1	10	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0
Toluene	ug/l	700	74	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0
Ethylbenzene	ug/l	300	20	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0
Xylenes	ug/l	500	30	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
p & m-xylene	ug/l	500	30	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
o-xylene	ug/l	500	30	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
MTBE	ug/l	15	-	< 1.00	< 1.0	< 1.00	< 1.0	< 1.00	< 1.00	< 1.00	< 1.00	< 1.0

VOC

MTBE	ug/l	15	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Heptane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Octane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Nonane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
Benzene	ug/l	1	10	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Toluene	ug/l	700	74	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Ethylbenzene	ug/l	300	20	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
m+p-xylene	ug/l	500	30	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
o-xylene	ug/l	500	30	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
cis-1,2-dichloroethene	ug/l	-	-	8	< 1.0	< 1	< 1.0	< 1	< 1	2	1	< 1.0
1,1-Dichloroethane	ug/l	0.007	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Chloroform	ug/l	-	2.5	< 1	8.6	< 1	7.9	8	2	< 1	< 1	18.8
Bromoform	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromochloromethane	ug/l	100	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromodichloromethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Tetrachloromethane	ug/l	3	12	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,1-Trichloroethane	ug/l	200	100	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Trichloroethylene	ug/l	-	10	27	< 1.0	< 1	< 1.0	< 1	< 1	1	< 1	< 1.0
Tetrachloroethylene	ug/l	10 (sum)	10	79	< 1.0	< 1	< 1.0	< 1	< 1	13	< 1	< 1.0
1,1,1,2-Tetrachloroethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,2,2-Tetrachloroethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Chlorobenzene	ug/l	100	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromobenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Methylethylbenzene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,1-Dichloro-1-propene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Trans - 1,2 - dichloroethylene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
2,2-Dichloropropane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Bromochloromethane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,2-Dichloroethane	ug/l	3	10	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromomethane	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,2-Dichloropropane	ug/l	22	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
cis-1,3-Dichloro-1-propene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
trans-1,3-Dichloro-1-propene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,1,2-Trichloroethane	ug/l	5	400	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,3-Dichloropropane	ug/l	20	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Dibromochloromethane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Styrene	ug/l	20	50	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Propylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
2-Chlorotoluene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2,4-Trimethylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
4-Chlorotoluene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
t-butylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,3,5-Trimethylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1-methylpropylbenzene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
p-cymene	ug/l	-	-	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1,3-Dichlorobenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Butylbenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2-Dibromo-3-chloropropane	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Hexachlorobutadiene	ug/l	0.6	0.6	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1-2,3 - Trichlorobenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Naphthalene	ug/l	-	2	< 1	-	< 1	-	< 1	< 1	< 1	< 1	-
1-2,4 - Trichlorobenzene	ug/l	-	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,4-Dichlorobenzene	ug/l	300	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
1,2-Dichlorobenzene	ug/l	1000	-	< 1	< 1.0	< 1	< 1.0	< 1	< 1	< 1	< 1	< 1.0
Chloromethane	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Chloroethane	ug/l	0.5	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Bromomethane	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Vinyl Chloride	ug/l	0.5	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Trichlorofluoromethane	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1-Dichloroethene	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
1,2-Dibromomethane	ug/l	0.4	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
sec-Butylbenzene	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
Isopropylbenzene	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0
p-Isopropyltoluene	ug/l	-	-	-	< 1.0	-	< 1.0	-	-	-	-	< 1.0

SVOC												
Phend	ug/l	-	7.7	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Aniline	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Bis(2-chloroethyl)ether	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2-Chlorophenol	ug/l	-	50	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1,3-Dichlorobenzene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1,4-Dichlorobenzene	ug/l	300	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Benzyl Alcohol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,2-Dichlorobenzene	ug/l	1000	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2-Methylphenol	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Bis(2-chloroisopropyl)ether	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
3 and 4-methylphenol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
N-Nitrosod-n-propylamine	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachloroethane	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Nitrobenzene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Isophorone	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2-Nitrophenol	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2,4-Dimethylphenol	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Bis(2-chloroethoxy)methane	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2,4-Dichlorophenol	ug/l	-	4.2	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1,3,5-Trichlorobenzene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Naphthalene	ug/l	-	2	0.01	< 0.01	0.02	< 0.01	0.02	< 0.01	0.02	< 0.01	< 0.01
3-Chloroaniline	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachloro-1,3-butadiene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
4-Chloro-3-methylphenol	ug/l	-	40	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2-Methylnaphthalene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1-Methylisquinoline	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachlorocyclopentadiene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,4,6-Trichlorophenol	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2,4,5-Trichlorophenol	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1-Chloronaphthalene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2-Nitroaniline	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
1,4-Dinitrobenzene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dimethyl phthalate	ug/l	-	800	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1,3-dinitrobenzene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2,6-dinitrotoluene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Acenaphthylene	ug/l	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
1,2-Dinitrobenzene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
3-Nitroaniline	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Acenaphthene	ug/l	-	-	< 0.01	-	0.02	-	< 0.01	< 0.01	< 0.01	< 0.01	-
4-nitrophenol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Dibenzofuran	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
2,3,5,6-Tetrachlorophenol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
2,3,4,6-Tetrachlorophenol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Diethyl phthalate	ug/l	-	200	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1-chloro-4-phenylbenzene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Fluorene	ug/l	-	-	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitroaniline	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Dinitro-o-cresol	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Diphenylamine	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Azobenzene	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
1-bromo-4-phenylbenzene	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Hexachlorobenzene	ug/l	0.05	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Pentachlorophenol	ug/l	9	0.4	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Phenanthrene	ug/l	-	-	0.02	< 0.01	0.06	< 0.01	0.01	< 0.01	0.02	0.05	< 0.01
Anthracene	ug/l	-	0.1	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Carbazole	ug/l	-	-	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Dibutyl phthalate	ug/l	-	8	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Fluoranthene	ug/l	-	0.0063	0.02	< 0.01	0.05	< 0.01	< 0.01	< 0.01	0.02	0.15	< 0.01
Pyrene	ug/l	-	-	0.03	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.02	0.15	< 0.01
Butyl benzyl phthalate	ug/l	-	7.5	< 1.00	< 0.05	< 1.00	< 0.05	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05
Bis-2-ethoxydiadipate	ug/l	8	1.3	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Disocetyl phthalate	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Benzo(a)anthracene	ug/l	-	-	0.03	< 0.01	0.04	< 0.01	< 0.01	< 0.01	< 0.01	0.08	< 0.01
Chrysene	ug/l	-	-	0.03	< 0.01	0.04	< 0.01	< 0.01	< 0.01	0.01	0.10	< 0.01
Bis(2-ethylhexyl)phthalate	ug/l	-	-	< 1.00	-	< 1.00	-	< 1.00	< 1.00	< 1.00	< 1.00	-
Benzo(b)fluoranthene	ug/l	-	-	0.05	< 0.01	0.03	< 0.01	0.01	< 0.01	< 0.01	0.08	< 0.01
Benzo(k)fluoranthene	ug/l	-	-	0.05	< 0.01	0.03	< 0.01	0.01	< 0.01	0.01	0.08	< 0.01
Benzo(ghi)perylene	ug/l	-	-	0.09	< 0.01	0.03	< 0.01	0.01	0.01	0.01	0.06	< 0.01
Indeno(1,2,3-CD)pyrene	ug/l	-	-	0.08	< 0.01	0.02	< 0.01	< 0.01	0.02	< 0.01	0.05	< 0.01
Dibenzo(a,h)anthracene	ug/l	-	-	0.09	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	0.02	< 0.01
Benzo(a)pyrene	ug/l	0.01	0.0002	0.04	< 0.01	0.03	< 0.01	< 0.01	< 0.01	< 0.01	0.10	< 0.01
4-Methylphenol	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
1,2,4-Trichlorobenzene	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
4-Chloroaniline	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
Hexachlorobutadiene	ug/l	0.6	0.6	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
2-Chloronaphthalene	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
2,4-Dinitrotoluene	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
3&4-Methylphenol	ug/l	-	-	-	< 0.10	-	< 0.10	-	-	-	-	< 0.10
Anthraquinone	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05
Bromophenyl phenyl ether	ug/l	-	-	-	< 0.05	-	< 0.05	-	-	-	-	< 0.05

Phenolics												
Phend	ug/l	-	7.7	1	-	< 1	-	< 1	< 1	< 1	< 1	-
M,P-Cresol	ug/l	-	-	1	-	< 1	-	< 1	< 1	< 1	< 1	-
O-Cresol	ug/l	-	-	1	-	< 1	-	< 1	< 1	< 1	< 1	-
3,4-Dimethylphenol	ug/l	-	-	1	-	< 1	-	< 1	< 1	< 1	< 1	-
2,3-Dimethylphenol	ug/l	-	-	1	-	< 1	-	< 1	< 1	< 1	< 1	-
2,3,5-trimethylphenol	ug/l	-	-	1	-	< 1	-	< 1	< 1	< 1	< 1	-
Total Monohydric Phenols	ug/l	-	7.7	1	4.8	< 1	3.4	< 1	< 1	< 1	< 1	4.8



Appendix D: Risk Assessment Matrix

A-squared Studio Engineers Ltd. qualitative risk assessment for geo-environmental purposes is undertaken in accordance with *CIRIA C552: Contaminated Land Risk Assessment, A Guide to Good Practice (Rudland et al., 2001)*. The CIRIA C552 risk categories and the assessment methodology are summarised below in Table D.1, Table D.2 and Table D.3. Potential magnitude and potential likelihood are both classified to enable a risk rating to be assessed.

Potential magnitude takes into account the potential consequences should a complete source–pathway–receptor linkage be present. Potential magnitude is classified as per Table D.1.

Table D.1 **Definition of potential magnitude of consequence**

Category	Definition
Severe	Acute risks to human health, catastrophic damage to buildings / property, major pollution to controlled waters.
Medium	Chronic risk to human health, pollution of sensitive controlled waters, significant effects on sensitive ecosystems or species, significant damage to buildings or structures.
Mild	Pollution of non-sensitive waters, minor damage to buildings or structures.
Minor	Damage to non-sensitive ecosystems or species.

Potential likelihood takes into account the presence of the hazard and receptor as well as the integrity of the pathway for exposure, i.e., whether a source-pathway-receptor linkage is present or not. Potential likelihood is classified as per Table D.2.

Table D.2 **Definition of potential likelihood of exposure**

Category	Definition
High Likelihood	Pollutant linkage may be present and is almost certain to occur in the long-term. Or there is evidence of harm to the receptor.
Likely	Pollutant linkage may be present, and it is probable that it will occur over the long-term.
Low Likelihood	Pollutant linkage may be present, and there is a possibility that it will occur, although there is no certainty that it will do so.
Unlikely	Pollutant linkage may be present, but it is improbable that it will occur.

The potential magnitude of consequence and the potential likelihood of exposure are assessed in accordance with the risk matrix presented in Table D.3.

Table D.3 **Geo-environmental risk assessment matrix**

		Potential Magnitude of Consequence			
		Severe	Medium	Mild	Minor
Potential Likelihood of Exposure	High Likelihood	Very High	High	Moderate	Low to Moderate
	Likely	High	Moderate	Low to Moderate	Low
	Low Likelihood	Moderate	Low to Moderate	Low	Very Low
	Unlikely	Low to Moderate	Low	Very Low	Very Low



Appendix E: Proposed Floor Plans (Residential Area Lower Levels)