



SPT sample from BH02 at 13.0mbgl.



Trimming from the UT100 shoe conducted in BH02 at 14.0mbgl.



SPT sample from BH02 at 15.0mbgl.



SPT sample from BH02 at 17.0mbgl.



SPT sample from BH02 at 18.0mbgl.

BH03



Hand dug pit (0.0-1.2mbgl) for BH03.



BH03 1.5-2.0mbgl.



BH03 2.5-3.0mbgl.



BH03 3.5-4.0mbgl.



BH03 4.5-5.0mbgl.



BH03 5.5-6.0mbgl.



BH03 6.5-7.0mbgl.



BH03 7.5-8.0mbgl.



BH03 8.5-9.0mbgl.



BH03 9.5-10.0mbgl.



BH03 10.5-11.0mbgl.



BH03 11.5-12.0mbgl.



SPT sample from BH03 at 12.0mbgl.



Trimming from UT100 shoe conducted in BH03 at 13.0mbgl.



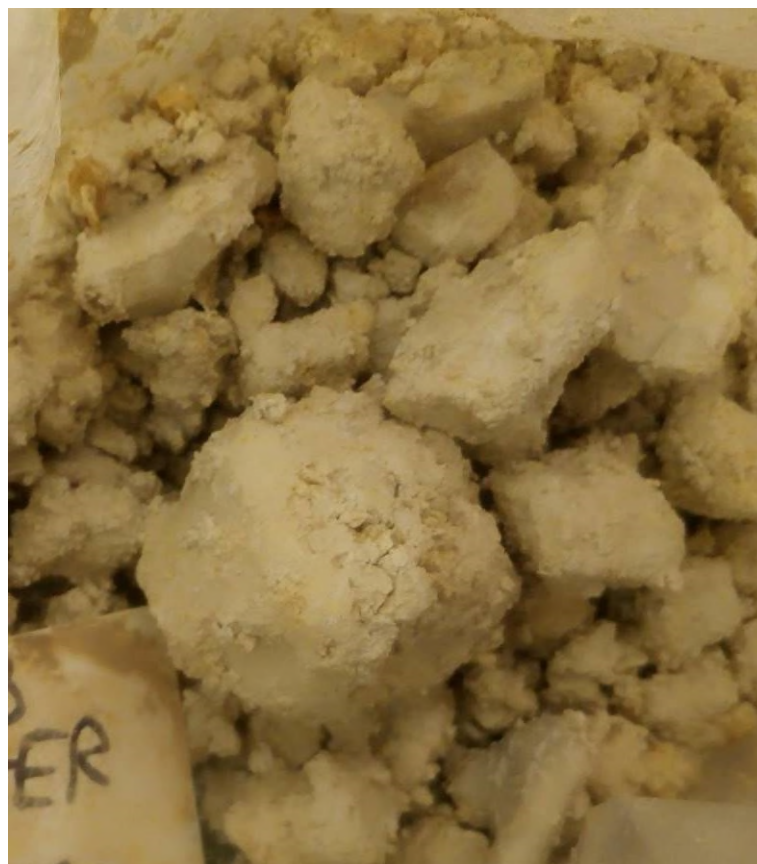
SPT sample from BH03 at 14.0mbgl.



Trimming from UT100 shoe conducted in BH03 at 15.0mbgl.



SPT sample from BH03 at 16.0mbgl.



Trimming from UT100 shoe conducted in BH03 at 17.0mbgl.



SPT sample from BH03 at 18.0mbgl.



BH03 at 19.1mbgl.



Failed UT100 sample from 19.0-19.2mbgl.



SPT sample from BH03 at 20.0mbgl.

DPSH45



Materials retrieved from the cable percussive borehole at DPSH45 0.0-11.0mbgl.

DPSH39



Materials retrieved from the cable percussive borehole at DPSH39 0.0-14.0mbgl.



WS01.



WS02.



WS03.



WS04.



WS05.



WS06.



WS07.



WS08.



WS09.

Appendix D

Geotechnical Laboratory Test Results

Summary of Classification Test Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW



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Project No.		Project Name										
13896		Broadwater Road, WGC										
Client Job No.		Client										
13896		South West Geotechnical Ltd										
Hole No.	Sample				Soil Description	WC	Passing 425µm	LL	PL	PI	Particle density	Remarks
	Type	Top	Base	Ref		%	%	%	%	%	Mg/m3	
BH01	B	4.50	5.00		Brown slightly gravelly slightly sandy silty CLAY	23.5	80 - Sieved	57	17	40	-	
BH01	B	6.50	7.00		Brown slightly gravelly slightly sandy slightly clayey SILT	19.1	97 - Sieved	33	17	16	-	
BH01	B	7.50	8.00		Brown slightly gravelly sandy slightly clayey SILT	14.9	99 - Sieved	29	14	15	-	
BH01	B	8.50			Brown slightly gravelly slightly sandy slightly clayey SILT	17.7	96 - Sieved	32	16	16	-	
DPSH39	D	4.20			Brown slightly gravelly slightly sandy silty CLAY	24.5	82 - Sieved	47	15	32	-	
WS09	D	4.60			Brown slightly gravelly slightly sandy silty CLAY	19.2	89 - Sieved	52	16	36	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	
						-	-	-	-	-	-	

Preparation in accordance with BS1377-1:2016 where applicable. Atterberg 4 point preparation in accordance with BS EN ISO 17892-12:2018

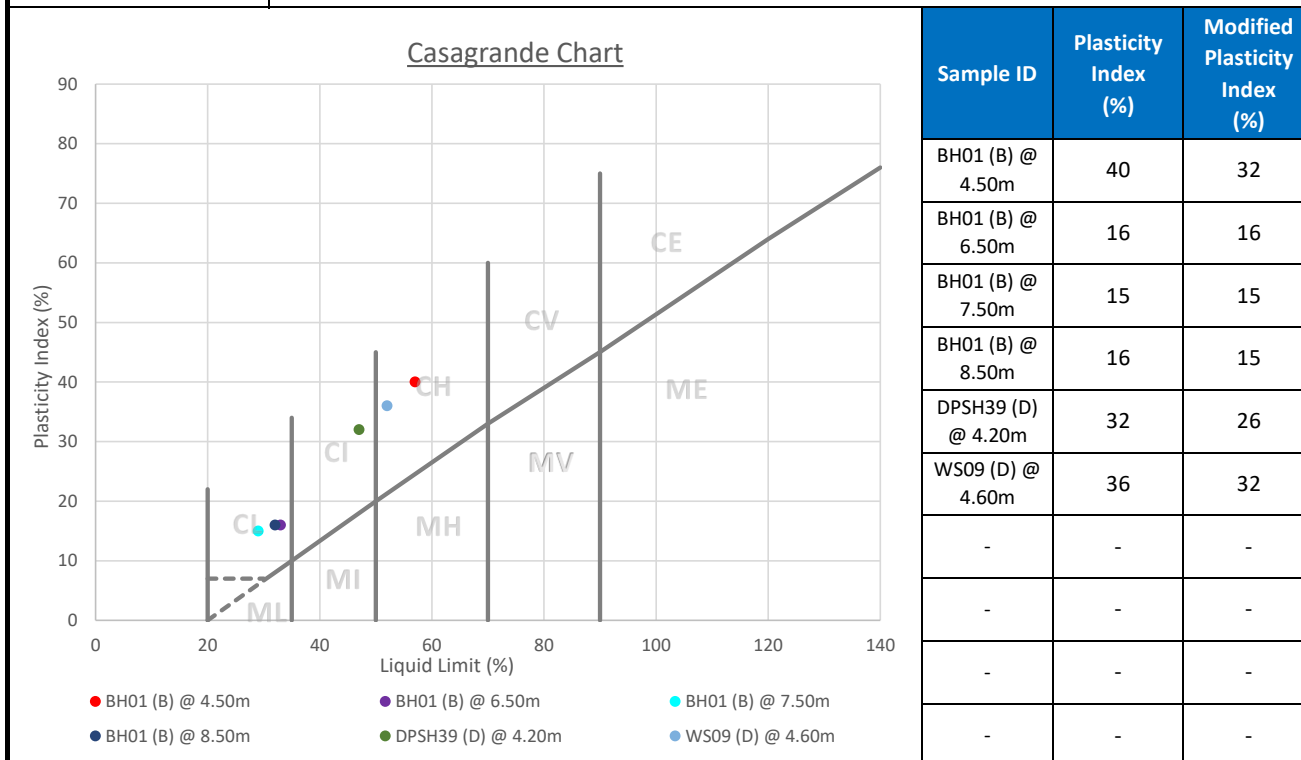
Key		Date		Approved By		Page No.	1
Atterberg Limits 4pt - BS EN ISO 17892-12:2018 (30° cone and increasing water contents) unless : 1pt - BS1377-2:1990 (CL.4.4)		Water Content (wc) % BS EN ISO 17892-1:2014 Particle density BS1377-2:1990 sp - small pyknometer CL.8.3 gj - gas jar CL.8.2		27/07/2023		David Trowbridge - Laboratory Manager	KL001R Index Summary

[illegible]

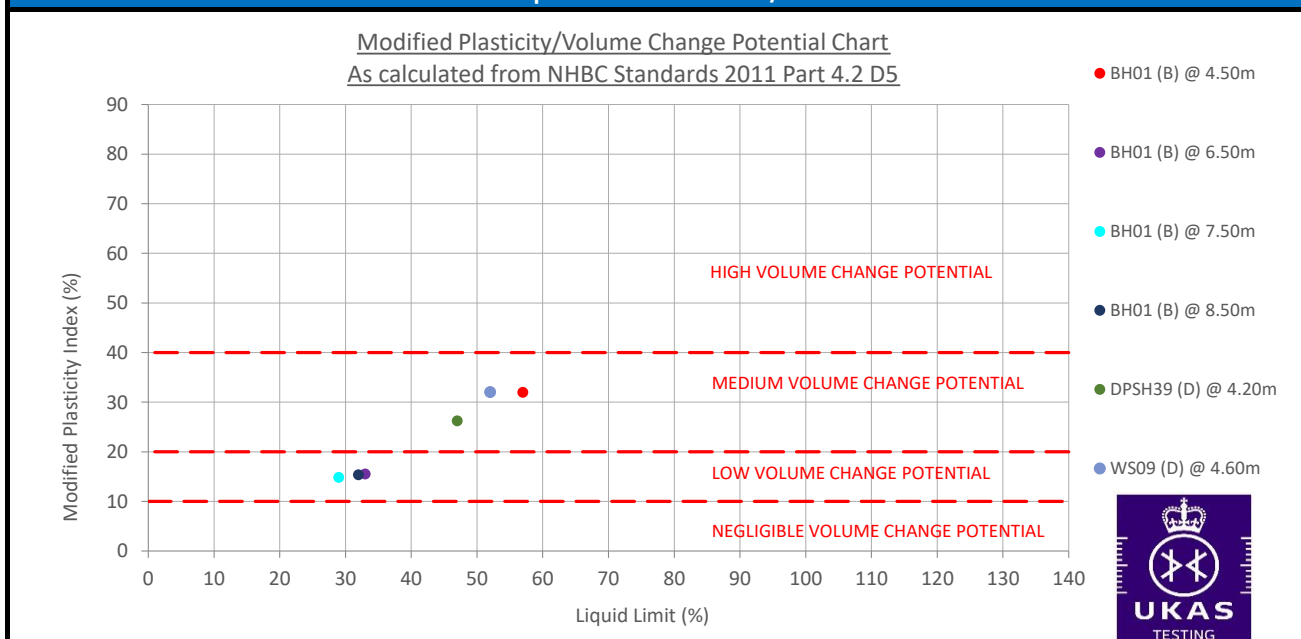
Graphical Summary of Atterberg Test Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon
EX16 5HW

Project No.	Project Name
13896	Broadwater Road, WGC
Client Job No.	Client
-	South West Geotechnical Ltd



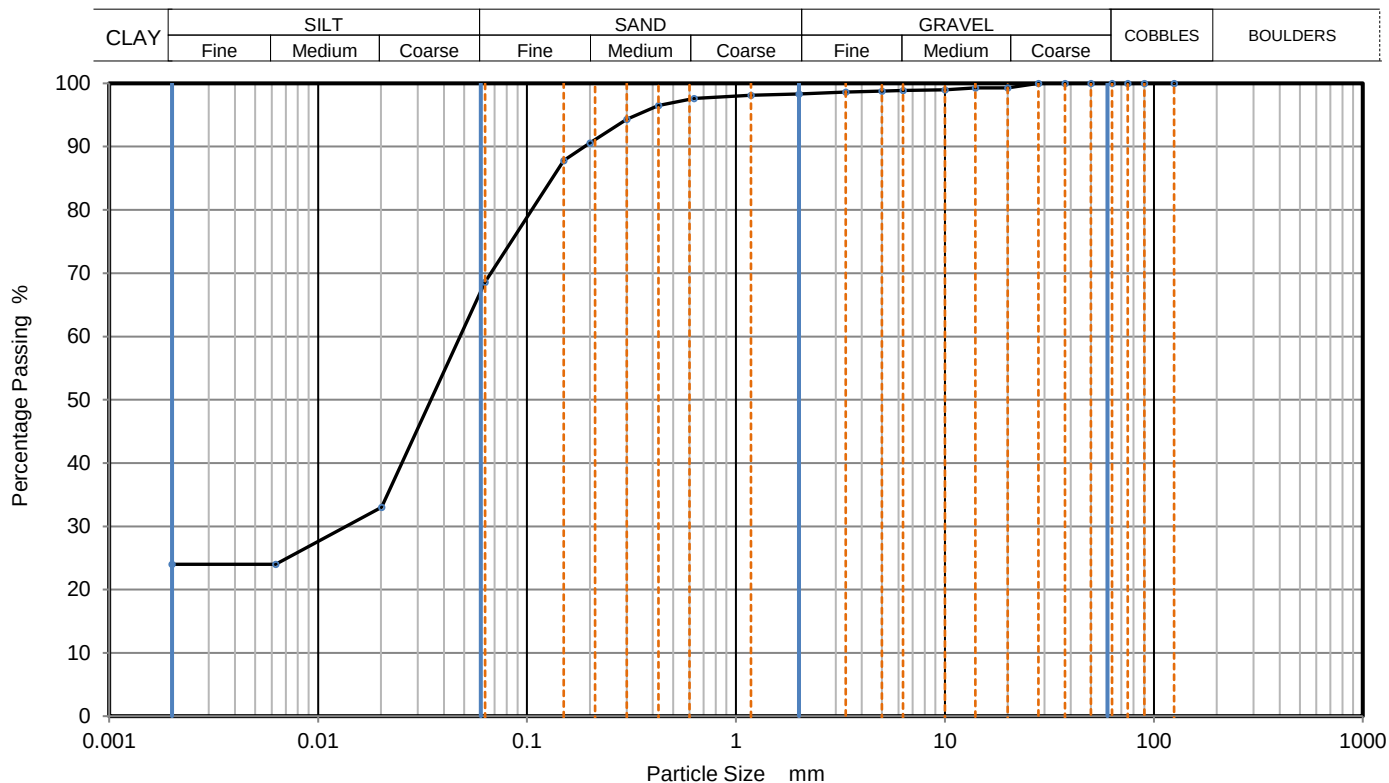
The Modified Plasticity Index (I_p) is defined as the Plasticity Index (I_p) of the soil multiplied by the percentage of particles less than 425 μ m.
ie. $I_p \times \% \text{ less than } 425\mu\text{m} / 100\%$



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KL001a Index Graphical Summary	Approved By	Date
	David Trowbridge - Laboratory Manager	27/07/2023 08:55

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	BH01	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown slightly gravelly slightly sandy slightly clayey SILT		Depth, m	6.50	
Specimen Reference	6	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	33
90	100	0.0063	24
75	100	0.0020	24
63	100		
50	100		
37.5	100		
28	100		
20	99		
14	99		
10	99		
6.3	99		
5	99		
3.35	99		
2	98		
1.18	98		
0.63	98	Particle density (assumed) 2.65 Mg/m3	
0.425	97		
0.3	94		
0.2	91		
0.15	88		
0.063	69		

Dry Mass of sample, g	2592
-----------------------	------

Sample Proportions	% dry mass
Very coarse	0
Gravel	2
Sand	30
Silt	44
Clay	24

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

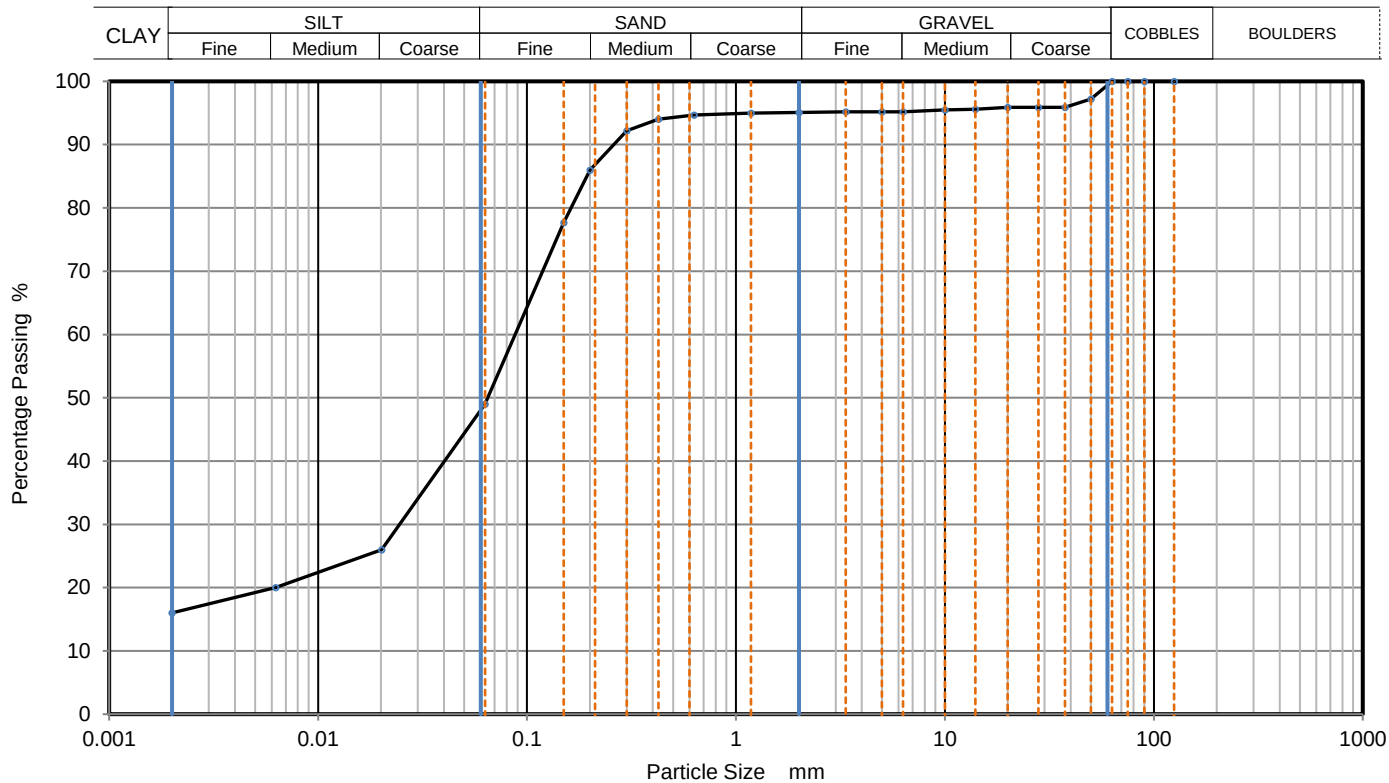
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	BH01	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown slightly gravelly sandy slightly clayey SILT		Depth, m	7.50	
Specimen Reference	6	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	26
90	100	0.0063	20
75	100	0.0020	16
63	100		
50	97		
37.5	96		
28	96		
20	96		
14	96		
10	96		
6.3	95		
5	95		
3.35	95		
2	95		
1.18	95		
0.63	95	Particle density (assumed) 2.65 Mg/m3	
0.425	94		
0.3	92		
0.2	86		
0.15	78		
0.063	49		

Dry Mass of sample, g	13072
-----------------------	-------

Sample Proportions	% dry mass
Very coarse	0
Gravel	5
Sand	46
Silt	33
Clay	16

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	
Curvature Coefficient	

Remarks

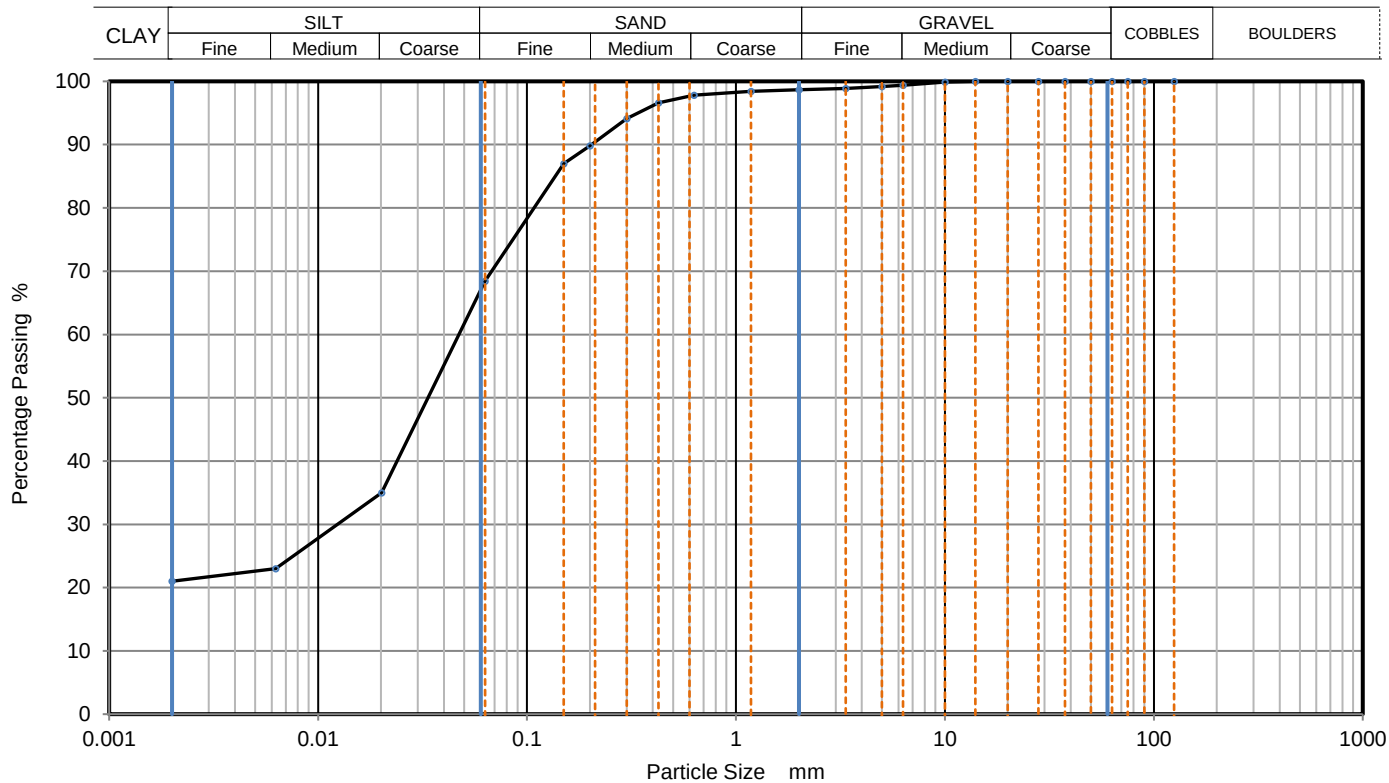
Preparation and testing in accordance with
BS EN ISO 17892-4: 2016



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17025:2017

Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	BH01	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown slightly gravelly slightly sandy slightly clayey SILT		Depth, m	8.50	
Specimen Reference	3	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	35
90	100	0.0063	23
75	100	0.0020	21
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	99		
1.18	98		
0.63	98	Particle density (assumed) 2.65 Mg/m3	
0.425	97		
0.3	94		
0.2	90		
0.15	87		
0.063	68		

Dry Mass of sample, g	785
-----------------------	-----

Sample Proportions	% dry mass
Very coarse	0
Gravel	1
Sand	30
Silt	48
Clay	21

Grading Analysis		
D100	mm	
D60	mm	0.0475
D30	mm	0.0125
D10	mm	
Uniformity Coefficient		
Curvature Coefficient		

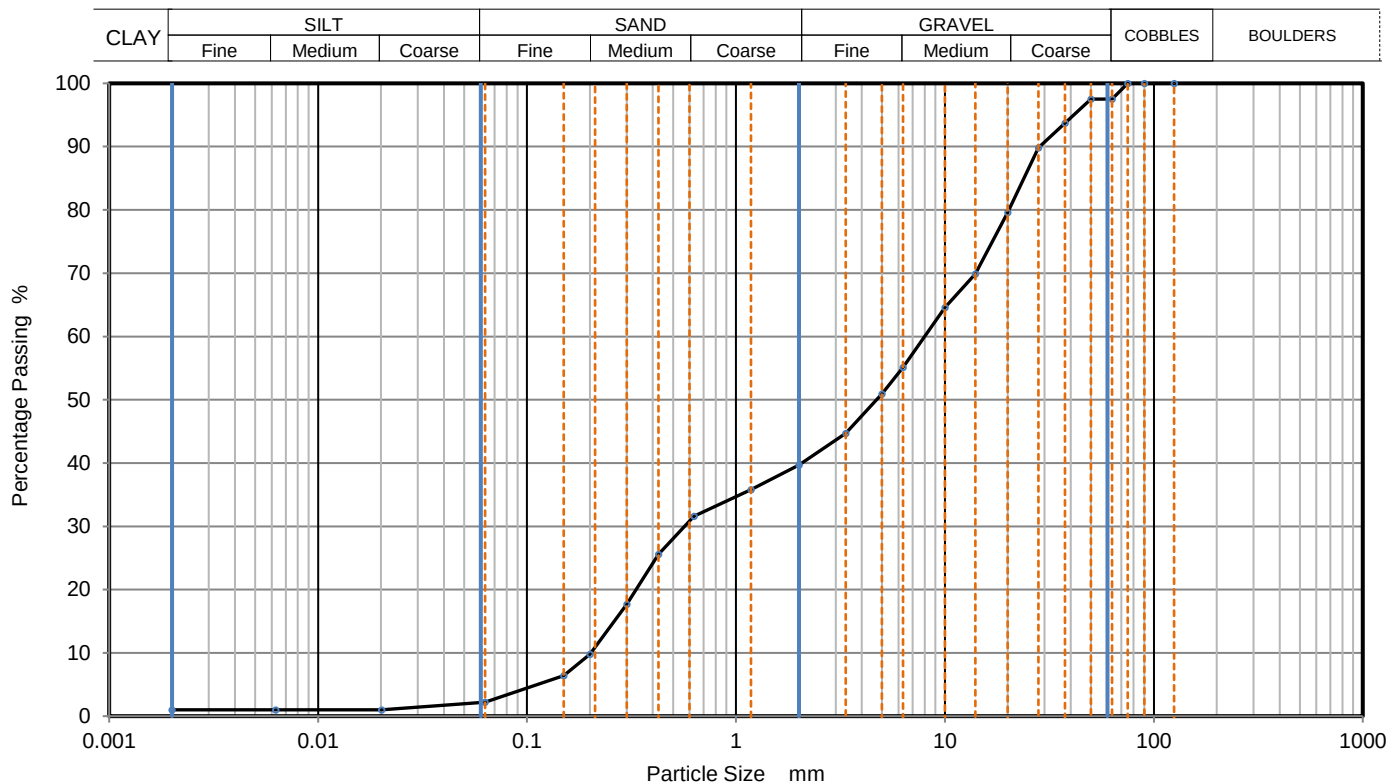
Remarks Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	BH02	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown very sandy slightly silty slightly clayey GRAVEL with low cobble content		Depth, m	7.50	
Specimen Reference	2	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	1
90	100	0.0063	1
75	100	0.0020	1
63	98		
50	98		
37.5	94		
28	90		
20	80		
14	70		
10	65		
6.3	55		
5	51		
3.35	45		
2	40		
1.18	36		
0.63	32	Particle density (assumed) 2.65 Mg/m3	
0.425	26		
0.3	18		
0.2	10		
0.15	6		
0.063	2		

Dry Mass of sample, g	14339
-----------------------	-------

Sample Proportions	% dry mass
Very coarse	3
Gravel	58
Sand	38
Silt	2
Clay	1

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	40
Curvature Coefficient	0.2

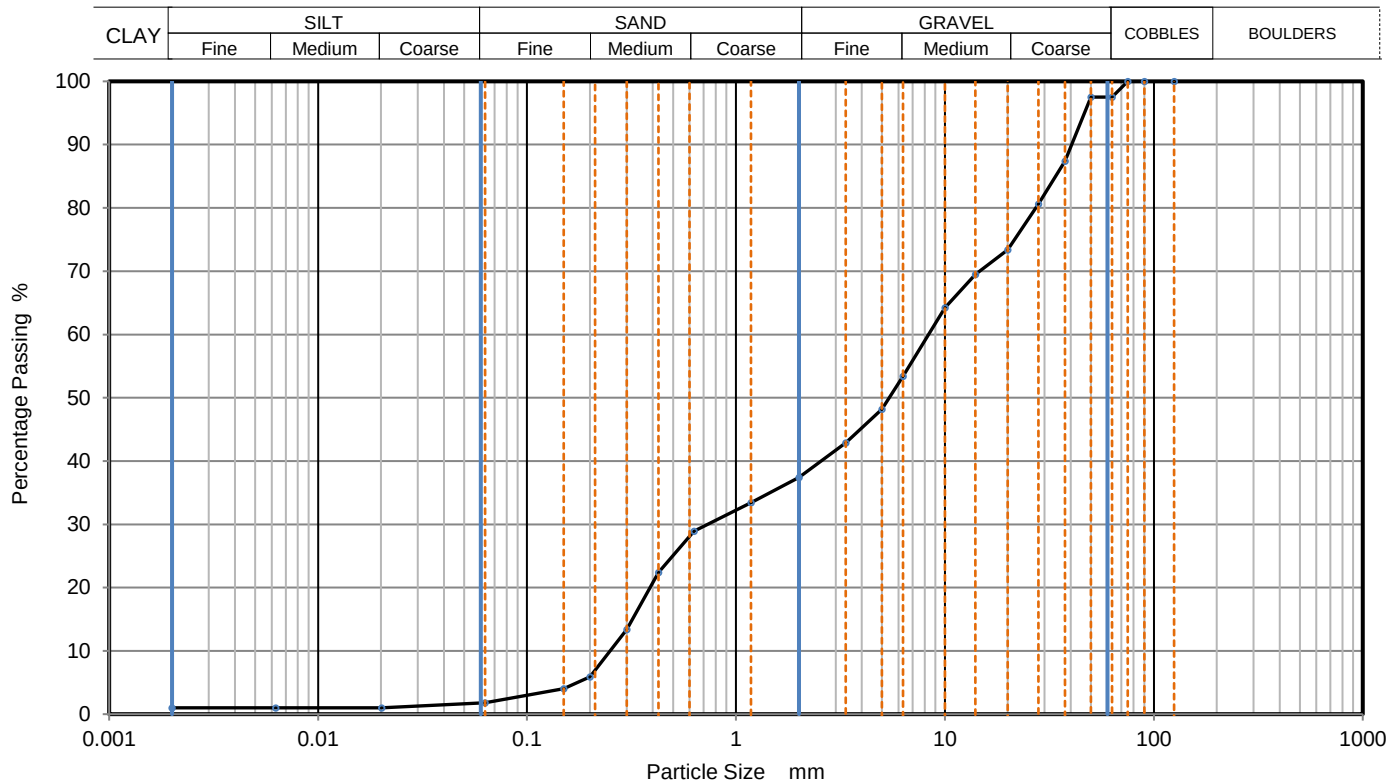
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	DPSH45	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown very sandy slightly silty slightly clayey GRAVEL with low cobble content		Depth, m	7.00	
Specimen Reference	2	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	1
90	100	0.0063	1
75	100	0.0020	1
63	98		
50	98		
37.5	87		
28	81		
20	73		
14	70		
10	64		
6.3	53		
5	48		
3.35	43		
2	37		
1.18	33		
0.63	29	Particle density (assumed) 2.65 Mg/m3	
0.425	22		
0.3	13		
0.2	6		
0.15	4		
0.063	2		

Dry Mass of sample, g	13323
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Sample Proportions	% dry mass
Very coarse	3
Gravel	60
Sand	36
Silt	1
Clay	1

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	33
Curvature Coefficient	0.26

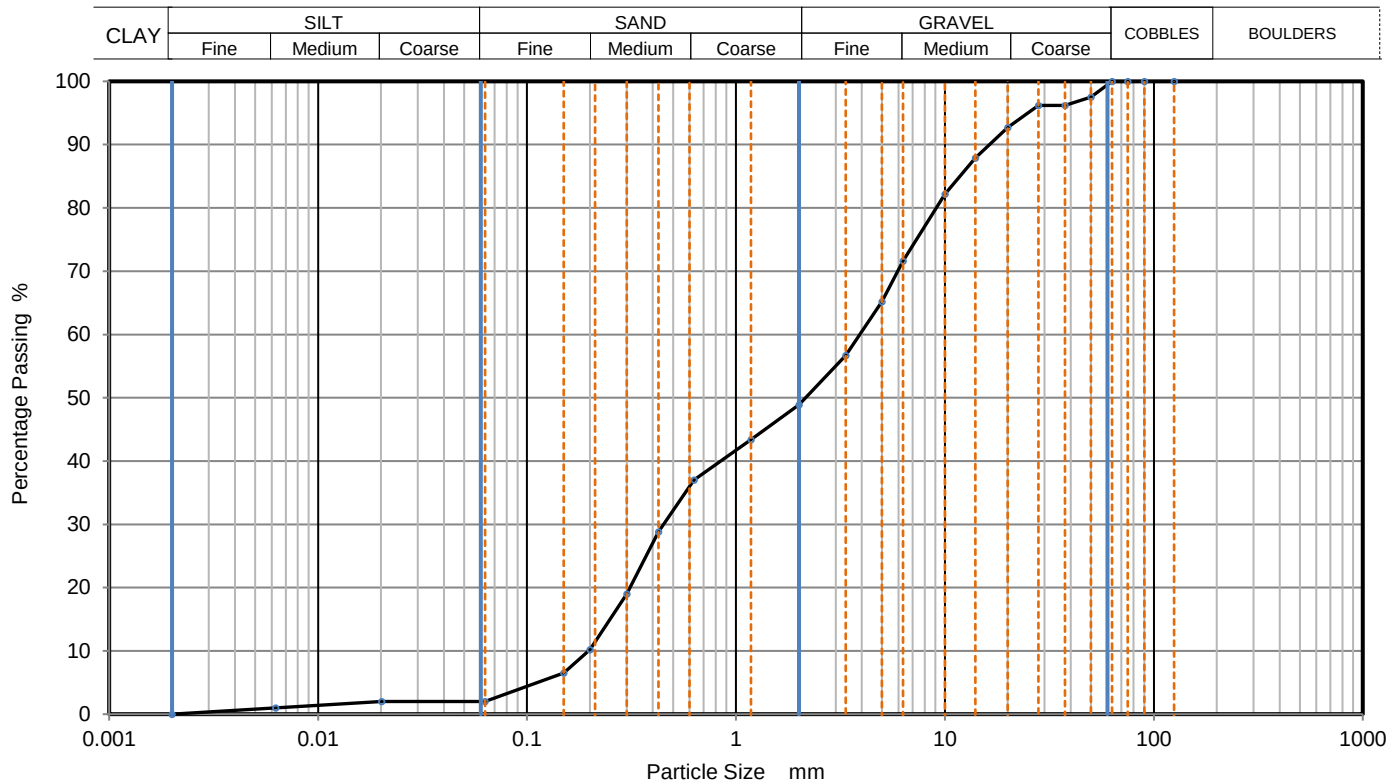
Remarks
Preparation and testing in accordance with BS EN ISO 17892-4: 2016 - Deviation to standard as insufficient material provided in order to meet the minimum mass requirement



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Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	DPSH45	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown very sandy slightly silty GRAVEL		Depth, m	8.00	
Specimen Reference	2	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clauses 5.2 & 5.4				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0201	2
90	100	0.0063	1
75	100	0.0020	0
63	100		
50	98		
37.5	96		
28	96		
20	93		
14	88		
10	82		
6.3	72		
5	65		
3.35	57		
2	49		
1.18	43		
0.63	37	Particle density (assumed) 2.65 Mg/m3	
0.425	29		
0.3	19		
0.2	10		
0.15	7		
0.075	2		

Dry Mass of sample, g	11082
-----------------------	-------

Sample Proportions	% dry mass
Very coarse	0
Gravel	51
Sand	47
Silt	2
Clay	0

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	20
Curvature Coefficient	0.26

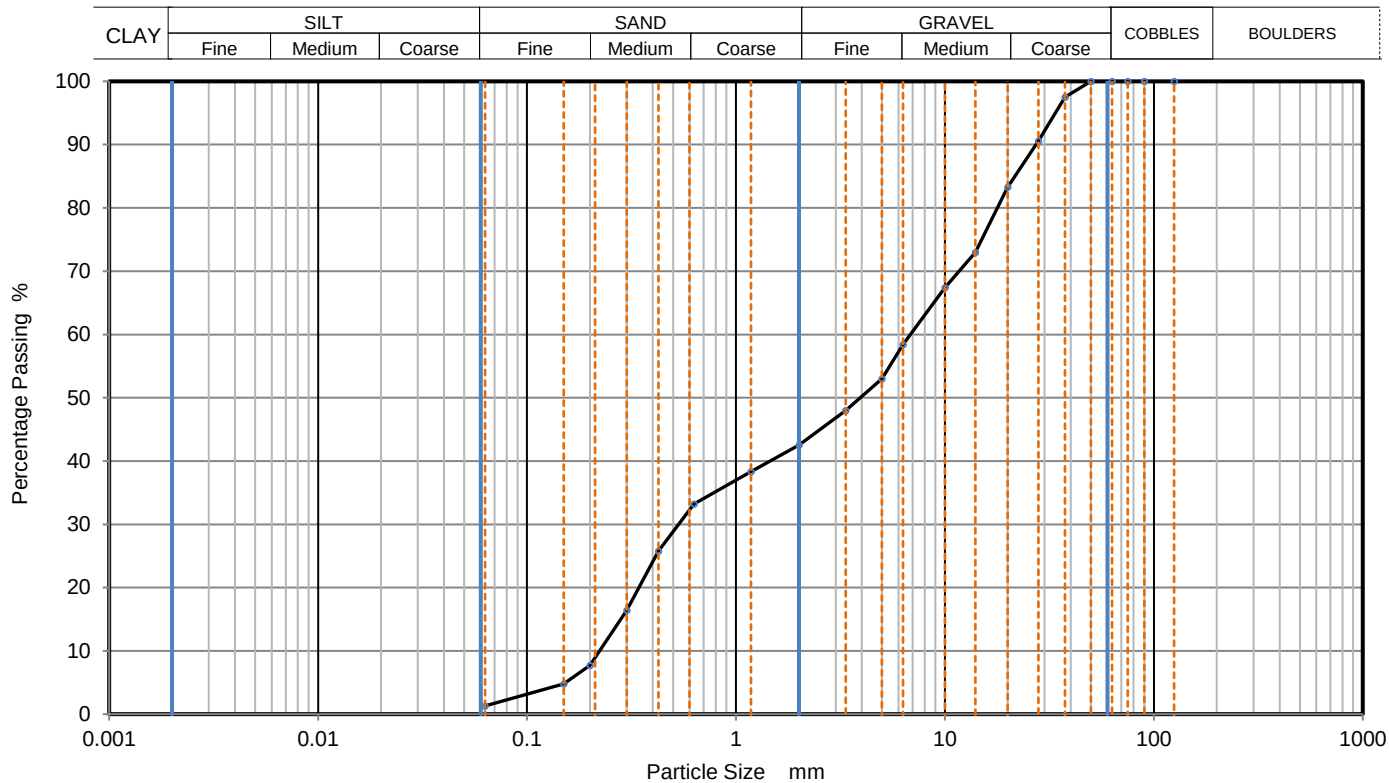
Remarks Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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17025:2017

Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD

	PARTICLE SIZE DISTRIBUTION		Project No.	13896	
			Borehole/Pit No.	DPSH45	
Project Name	Broadwater Road, WGC		Sample No.		
Soil Description	Brown very sandy slightly silty/clayey GRAVEL		Depth, m	9.50	
Specimen Reference	2	Specimen Depth	m	Sample Type	B
Test Method	BS EN ISO 17892-4: 2016, clause 5.2				



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	98		
28	91		
20	83		
14	73		
10	67		
6.3	58		
5	53		
3.35	48		
2	43		
1.18	38		
0.63	33		
0.425	26		
0.3	16		
0.2	8		
0.15	5		
0.063	1		

Dry Mass of sample, g	10862
-----------------------	-------

Sample Proportions	% dry mass
Very coarse	0
Gravel	58
Sand	41
Fines <0.063mm	1

Grading Analysis	
D100	mm
D60	mm
D30	mm
D10	mm
Uniformity Coefficient	31
Curvature Coefficient	0.19

Remarks

Preparation and testing in accordance with BS EN ISO 17892-4: 2016



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17025:2017

Approved by	Date	Sheet ID:
David Trowbridge - Laboratory Manager	27/07/2023	KL002R PSD



Appendix E

Geo-environmental Laboratory Test, Statistical Assessment and HazWaste Online Results



David Trowbridge
South West Geotechnical Ltd
Unit 3 Brooklands
Howden Road
Tiverton
Devon
EX16 5HW

Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 23-08831

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614

Order No: T8614

Sample Receipt Date: 07/07/2023

Sample Scheduled Date: 07/07/2023

Report Issue Number: 1

Reporting Date: 18/07/2023

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	21/06/23	21/06/23	21/06/23	21/06/23	19/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH01	BH01	BH01	BH01	BH02
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.20	0.75	1.75	5.00	0.50
Reporting Date: 18/07/2023	DETS Sample No	662329	662330	662331	662332	662333

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected		Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	11.3	9.3	8.4	7.8
Total Cyanide	mg/kg	< 1	NONE		< 1	3	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS		213	51	43
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS		0.21	0.05	0.04
Organic Matter (SOM)	%	< 0.1	MCERTS		0.8	0.6	
Arsenic (As)	mg/kg	< 2	MCERTS		38	39	5
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		< 0.2	< 0.2	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS		23	21	5
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS		23	26	4
Lead (Pb)	mg/kg	< 3	MCERTS		19	19	4
Mercury (Hg)	mg/kg	< 1	MCERTS		< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS		35	30	6
Selenium (Se)	mg/kg	< 2	MCERTS		< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS		192	217	27

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	19/06/23	19/06/23	19/06/23	19/06/23	19/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH02	BH02	BH02	BH02	BH02
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	1.00	1.75	4.00	6.75	12.00
Reporting Date: 18/07/2023	DETS Sample No	662334	662335	662336	662337	662338

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)
Asbestos Screen ^(S)	N/a	N/a	ISO17025		Not Detected	
pH	pH Units	N/a	MCERTS	8.5	7.7	8.1 7.9
Total Cyanide	mg/kg	< 1	NONE	< 1		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	37	32	15 80
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.04	0.03	0.02 0.08
Organic Matter (SOM)	%	< 0.1	MCERTS	0.9		
Arsenic (As)	mg/kg	< 2	MCERTS	26		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3		
Chromium (Cr)	mg/kg	< 2	MCERTS	27		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	18		
Lead (Pb)	mg/kg	< 3	MCERTS	20		
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	26		
Selenium (Se)	mg/kg	< 2	MCERTS	< 2		
Zinc (Zn)	mg/kg	< 3	MCERTS	370		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	23/06/23	23/06/23	23/06/23	23/06/23	27/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH03	BH03	BH03	BH03	DPSH45
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.40	1.60	3.80	8.75	0.50
Reporting Date: 18/07/2023	DETS Sample No	662339	662340	662341	662342	662343

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025		Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	8.0			8.1
Total Cyanide	mg/kg	< 1	NONE	< 1			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	41			< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.04			< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	1.6			
Arsenic (As)	mg/kg	< 2	MCERTS	23			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.6			
Chromium (Cr)	mg/kg	< 2	MCERTS	20			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	32			
Lead (Pb)	mg/kg	< 3	MCERTS	49			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	18			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Zinc (Zn)	mg/kg	< 3	MCERTS	124			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	22/06/23	20/06/23	20/06/23	20/06/23	20/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	WS01	WS02	WS02	WS02	WS03
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.50	0.50	0.90	2.50	0.60
Reporting Date: 18/07/2023	DETS Sample No	662344	662345	662346	662347	662348

Determinand	Unit	RL	Accreditation	(n)			
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected		Not Detected	
pH	pH Units	N/a	MCERTS	8.2		7.5	10.7
Total Cyanide	mg/kg	< 1	NONE	< 1		< 1	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10		41	245
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01		0.04	0.24
Organic Matter (SOM)	%	< 0.1	MCERTS	0.4		0.8	1.4
Arsenic (As)	mg/kg	< 2	MCERTS	36		44	39
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2		< 0.2	9.5
Chromium (Cr)	mg/kg	< 2	MCERTS	29		32	25
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2		< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	10		19	30
Lead (Pb)	mg/kg	< 3	MCERTS	11		21	25
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1		< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	24		24	36
Selenium (Se)	mg/kg	< 2	MCERTS	< 2		< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	88		123	199

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	21/06/23	22/06/23	22/06/23	20/06/23	20/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	WS03	WS04	WS04	WS07	WS07
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	1.75	1.50	4.75	0.50	0.90
Reporting Date: 18/07/2023	DETS Sample No	662349	662350	662351	662352	662353

Determinand	Unit	RL	Accreditation	(n)			
Asbestos Screen ^(S)	N/a	N/a	ISO17025			Not Detected	
pH	pH Units	N/a	MCERTS	9.9	8.1		7.6
Total Cyanide	mg/kg	< 1	NONE				
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	135	40		47
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.14	0.04		0.05
Organic Matter (SOM)	%	< 0.1	MCERTS				
Arsenic (As)	mg/kg	< 2	MCERTS				
Cadmium (Cd)	mg/kg	< 0.2	MCERTS				
Chromium (Cr)	mg/kg	< 2	MCERTS				
Chromium (hexavalent)	mg/kg	< 2	NONE				
Copper (Cu)	mg/kg	< 4	MCERTS				
Lead (Pb)	mg/kg	< 3	MCERTS				
Mercury (Hg)	mg/kg	< 1	MCERTS				
Nickel (Ni)	mg/kg	< 3	MCERTS				
Selenium (Se)	mg/kg	< 2	MCERTS				
Zinc (Zn)	mg/kg	< 3	MCERTS				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate						
DETS Report No: 23-08831	Date Sampled	20/06/23	20/06/23			
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Broadwater Road, WGC	TP / BH No	WS09	WS09			
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied			
Order No: T8614	Depth (m)	0.30	0.80			
Reporting Date: 18/07/2023	DETS Sample No	662354	662355			

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025				
pH	pH Units	N/a	MCERTS		7.0		
Total Cyanide	mg/kg	< 1	NONE		< 1		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS		22		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS		0.02		
Organic Matter (SOM)	%	< 0.1	MCERTS		0.8		
Arsenic (As)	mg/kg	< 2	MCERTS		20		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS		< 0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS		28		
Chromium (hexavalent)	mg/kg	< 2	NONE		< 2		
Copper (Cu)	mg/kg	< 4	MCERTS		21		
Lead (Pb)	mg/kg	< 3	MCERTS		12		
Mercury (Hg)	mg/kg	< 1	MCERTS		< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS		19		
Selenium (Se)	mg/kg	< 2	MCERTS		< 2		
Zinc (Zn)	mg/kg	< 3	MCERTS		51		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-08831	Date Sampled	21/06/23	21/06/23	19/06/23	19/06/23	23/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH01	BH01	BH02	BH02	BH03
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.75	1.75	0.50	1.00	0.40
Reporting Date: 18/07/2023	DETS Sample No	662330	662331	662333	662334	662339

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate - Speciated PAHs					
DETS Report No: 23-08831	Date Sampled	22/06/23	20/06/23	20/06/23	20/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	WS01	WS02	WS03	WS09
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.50	0.90	0.60	0.80
Reporting Date: 18/07/2023	DETS Sample No	662344	662346	662348	662355

Determinand	Unit	RL	Accreditation	(n)			
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6



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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-08831	Date Sampled	21/06/23	21/06/23	19/06/23	19/06/23	23/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH01	BH01	BH02	BH02	BH03
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.75	1.75	0.50	1.00	0.40
Reporting Date: 18/07/2023	DETS Sample No	662330	662331	662333	662334	662339

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	41	< 10	< 10	19	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	41	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-08831	Date Sampled	22/06/23	20/06/23	20/06/23	21/06/23	20/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	WS01	WS02	WS03	WS03	WS09
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.50	0.90	0.60	1.75	0.30
Reporting Date: 18/07/2023	DETS Sample No	662344	662346	662348	662349	662354

Determinand	Unit	RL	Accreditation	(n)			
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	10	
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	73	
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	83	
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	< 42	83	



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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-08831	Date Sampled	20/06/23				
South West Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Broadwater Road, WGC	TP / BH No	WS09				
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied				
Order No: T8614	Depth (m)	0.80				
Reporting Date: 18/07/2023	DETS Sample No	662355				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			



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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-08831	Date Sampled	21/06/23	21/06/23	19/06/23	19/06/23	23/06/23
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Broadwater Road, WGC	TP / BH No	BH01	BH01	BH02	BH02	BH03
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: T8614	Depth (m)	0.75	1.75	0.50	1.00	0.40
Reporting Date: 18/07/2023	DETS Sample No	662330	662331	662333	662334	662339

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

(n) Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation



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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-08831	Date Sampled	22/06/23	20/06/23	20/06/23	20/06/23	
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
Site Reference: Broadwater Road, WGC	TP / BH No	WS01	WS02	WS03	WS09	
Project / Job Ref: 13896/T8614	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
Order No: T8614	Depth (m)	0.50	0.90	0.60	0.80	
Reporting Date: 18/07/2023	DETS Sample No	662344	662346	662348	662355	

Determinand	Unit	RL	Accreditation	(n)			
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5

Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3									
DETS Report No: 23-08831		Date Sampled	22/06/23		Landfill Waste Acceptance Criteria Limits				
South West Geotechnical Ltd		Time Sampled	None Supplied						
Site Reference: Broadwater Road, WGC		TP / BH No	WS01						
Project / Job Ref: 13896/T8614		Additional Refs	None Supplied						
Order No: T8614		Depth (m)	0.50						
Reporting Date: 18/07/2023		DETS Sample No	662344						
Determinand	Unit	MDL			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill		
TOC ^{MU}	%	< 0.1	0.2		3%	5%	6%		
Loss on Ignition ^{MU}	%	< 0.01	1.07		--	--	10%		
BTEX ^{MU}	mg/kg	< 0.05	< 0.05		6	--	--		
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--		
Mineral Oil ^{MU}	mg/kg	< 10	< 10		500	--	--		
Total PAH ^{MU}	mg/kg	< 1.7	< 1.7		100	--	--		
pH ^{MU}	pH Units	N/a	8.2		--	>6	--		
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		--	To be evaluated	To be evaluated		
Eluate Analysis			2:1	8:1	Cumulative 10:1	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
			mg/l	mg/l	mg/kg				
Arsenic ^U			< 0.01	< 0.01	< 0.2	0.5	2	25	
Barium ^U			0.02	< 0.02	0.1	20	100	300	
Cadmium ^U			< 0.0005	< 0.0005	< 0.02	0.04	1	5	
Chromium ^U			< 0.005	< 0.005	< 0.20	0.5	10	70	
Copper ^U			< 0.01	< 0.01	< 0.5	2	50	100	
Mercury ^U			< 0.0005	< 0.0005	< 0.005	0.01	0.2	2	
Molybdenum ^U			0.003	0.002	< 0.1	0.5	10	30	
Nickel ^U			< 0.007	< 0.007	< 0.2	0.4	10	40	
Lead ^U			< 0.005	< 0.005	< 0.2	0.5	10	50	
Antimony ^U			< 0.005	< 0.005	< 0.05	0.06	0.7	5	
Selenium ^U			< 0.005	< 0.005	< 0.05	0.1	0.5	7	
Zinc ^U			0.014	0.027	0.3	4	50	200	
Chloride ^U			1	2	18	800	15000	25000	
Fluoride ^U			< 0.5	< 0.5	< 1	10	150	500	
Sulphate ^U			2	1	< 20	1000	20000	50000	
TDS			75	64	652	4000	60000	100000	
Phenol Index ^U			< 0.01	< 0.01	< 0.5	1	-	-	
DOC ^U			3.8	10.6	98.4	500	800	1000	
Leach Test Information									
Sample Mass (kg)			0.18						
Dry Matter (%)			95.6						
Moisture (%)			4.6						
Stage 1									
Volume Eluate L2 (litres)			0.34						
Filtered Eluate VE1 (litres)			0.19						
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation M Denotes MCERTS accredited test U Denotes ISO17025 accredited test									

Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3									
DETS Report No: 23-08831		Date Sampled	21/06/23		Landfill Waste Acceptance Criteria Limits				
South West Geotechnical Ltd		Time Sampled	None Supplied						
Site Reference: Broadwater Road, WGC		TP / BH No	WS03						
Project / Job Ref: 13896/T8614		Additional Refs	None Supplied						
Order No: T8614		Depth (m)	1.75						
Reporting Date: 18/07/2023		DETS Sample No	662349						
Determinand	Unit	MDL			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill		
TOC ^{MU}	%	< 0.1	0.3		3%	5%	6%		
Loss on Ignition ^{MU}	%	< 0.01	3.40		--	--	10%		
BTEX ^{MU}	mg/kg	< 0.05	< 0.05		6	--	--		
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--		
Mineral Oil ^{MU}	mg/kg	< 10	< 10		500	--	--		
Total PAH ^{MU}	mg/kg	< 1.7	< 1.7		100	--	--		
pH ^{MU}	pH Units	N/a	7.9		--	>6	--		
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		--	To be evaluated	To be evaluated		
Eluate Analysis			2:1	8:1	Cumulative 10:1	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
			mg/l	mg/l	mg/kg				
Arsenic ^U			< 0.01	< 0.01	< 0.2	0.5	2	25	
Barium ^U			< 0.02	< 0.02	< 0.1	20	100	300	
Cadmium ^U			< 0.0005	< 0.0005	< 0.02	0.04	1	5	
Chromium ^U			< 0.005	< 0.005	< 0.20	0.5	10	70	
Copper ^U			< 0.01	< 0.01	< 0.5	2	50	100	
Mercury ^U			< 0.0005	< 0.0005	< 0.005	0.01	0.2	2	
Molybdenum ^U			< 0.001	< 0.001	< 0.1	0.5	10	30	
Nickel ^U			< 0.007	< 0.007	< 0.2	0.4	10	40	
Lead ^U			< 0.005	< 0.005	< 0.2	0.5	10	50	
Antimony ^U			< 0.005	< 0.005	< 0.05	0.06	0.7	5	
Selenium ^U			< 0.005	< 0.005	< 0.05	0.1	0.5	7	
Zinc ^U			0.024	0.051	0.5	4	50	200	
Chloride ^U			25	2	43	800	15000	25000	
Fluoride ^U			< 0.5	< 0.5	< 1	10	150	500	
Sulphate ^U			26	2	44	1000	20000	50000	
TDS			121	24	328	4000	60000	100000	
Phenol Index ^U			< 0.01	< 0.01	< 0.5	1	-	-	
DOC ^U			7.5	5.1	52.8	500	800	1000	
Leach Test Information									
Sample Mass (kg)			0.19						
Dry Matter (%)			92.7						
Moisture (%)			7.8						
Stage 1									
Volume Eluate L2 (litres)			0.34						
Filtered Eluate VE1 (litres)			0.16						
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation M Denotes MCERTS accredited test U Denotes ISO17025 accredited test									

Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3									
DETS Report No: 23-08831		Date Sampled	20/06/23		Landfill Waste Acceptance Criteria Limits				
South West Geotechnical Ltd		Time Sampled	None Supplied						
Site Reference: Broadwater Road, WGC		TP / BH No	WS09						
Project / Job Ref: 13896/T8614		Additional Refs	None Supplied						
Order No: T8614		Depth (m)	0.30						
Reporting Date: 18/07/2023		DETS Sample No	662354						
Determinand	Unit	MDL			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill		
TOC ^U	%	< 0.1	0.3		3%	5%	6%		
Loss on Ignition ^U	%	< 0.01	1.98		--	--	10%		
BTEX ^U	mg/kg	< 0.05	< 0.05		6	--	--		
Sum of PCBs	mg/kg	< 0.1	< 0.1		1	--	--		
Mineral Oil ^U	mg/kg	< 10	21		500	--	--		
Total PAH ^U	mg/kg	< 1.7	< 1.7		100	--	--		
pH ^U	pH Units	N/a	10.0		--	>6	--		
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1		--	To be evaluated	To be evaluated		
Eluate Analysis			2:1 mg/l	8:1 mg/l	Cumulative 10:1 mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
Arsenic ^U		0.01	0.01	< 0.2	0.5	2	25		
Barium ^U		< 0.02	< 0.02	< 0.1	20	100	300		
Cadmium ^U		< 0.0005	< 0.0005	< 0.02	0.04	1	5		
Chromium ^U		0.017	0.006	< 0.20	0.5	10	70		
Copper ^U		0.01	< 0.01	< 0.5	2	50	100		
Mercury ^U		< 0.0005	< 0.0005	< 0.005	0.01	0.2	2		
Molybdenum ^U		0.015	0.003	< 0.1	0.5	10	30		
Nickel ^U		< 0.007	< 0.007	< 0.2	0.4	10	40		
Lead ^U		< 0.005	< 0.005	< 0.2	0.5	10	50		
Antimony ^U		< 0.005	< 0.005	< 0.05	0.06	0.7	5		
Selenium ^U		< 0.005	< 0.005	< 0.05	0.1	0.5	7		
Zinc ^U		0.019	0.017	< 0.2	4	50	200		
Chloride ^U		21	3	49	800	15000	25000		
Fluoride ^U		0.6	< 0.5	< 1	10	150	500		
Sulphate ^U		29	15	167	1000	20000	50000		
TDS		155	98	1038	4000	60000	100000		
Phenol Index ^U		< 0.01	< 0.01	< 0.5	1	-	-		
DOC ^U		16.8	12.6	130	500	800	1000		
Leach Test Information									
Sample Mass (kg)			0.18						
Dry Matter (%)			95.9						
Moisture (%)			4.2						
Stage 1									
Volume Eluate L2 (litres)			0.34						
Filtered Eluate VE1 (litres)			0.18						
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion Stated limits are for guidance only and DETS Ltd cannot be held responsible for any discrepancies with current legislation M Denotes MCERTS accredited test U Denotes ISO17025 accredited test									



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Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 23-08831	
South West Geotechnical Ltd	
Site Reference: Broadwater Road, WGC	
Project / Job Ref: 13896/T8614	
Order No: T8614	
Reporting Date: 18/07/2023	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
\$ 662329	BH01	None Supplied	0.20	6.5	Brown sandy gravel with stones and concrete
\$ 662330	BH01	None Supplied	0.75	6.5	Light brown sandy gravel with stones
\$ 662331	BH01	None Supplied	1.75	11	Light brown sandy clay with stones
\$ 662332	BH01	None Supplied	5.00	16.7	Light brown clay
\$ 662333	BH02	None Supplied	0.50	4.6	Brown sandy gravel with stones
\$ 662334	BH02	None Supplied	1.00	8.7	Brown sandy gravel with stones
\$ 662335	BH02	None Supplied	1.75	11.3	Light brown sandy gravel with stones
\$ 662337	BH02	None Supplied	6.75	4.9	Brown gravelly sand with stones
\$ 662338	BH02	None Supplied	12.00	25.6	White chalk
\$ 662339	BH03	None Supplied	0.40	9	Brown sandy clay with stones
\$ 662342	BH03	None Supplied	8.75	6.9	Brown gravelly sand with stones
\$ 662344	WS01	None Supplied	0.50	4.4	Light brown sandy gravel with stones
\$ 662346	WS02	None Supplied	0.90	9.1	Light brown sandy clay with stones
\$ 662348	WS03	None Supplied	0.60	3.5	Brown sandy clay with stones
\$ 662349	WS03	None Supplied	1.75	7.2	Light brown sandy clay with stones
\$ 662350	WS04	None Supplied	1.50	9.6	Brown sandy clay with stones
\$ 662351	WS04	None Supplied	4.75	11.4	Brown clay with chalk
\$ 662353	WS07	None Supplied	0.90	4.9	Light brown sandy clay with stones
\$ 662354	WS09	None Supplied	0.30	4.1	Light brown sandy clay with stones
\$ 662355	WS09	None Supplied	0.80	17.1	Light brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{4/5}

\$ samples exceeded recommended holding times



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 23-08831

South West Geotechnical Ltd

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614

Order No: T8614

Reporting Date: 18/07/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



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Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 23-08831

South West Geotechnical Ltd

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614

Order No: T8614

Reporting Date: 18/07/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered



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List of HWOL Acronyms and Operators

DETS Report No: 23-08831

South West Geotechnical Ltd

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614

Order No: T8614

Reporting Date: 18/07/2023

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-3) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-3) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Parameter	Matrix Type	Suite Reference	Expanded Uncertainty Measurement	Unit
TOC	Soil	BS EN 12457	10.4	%
Loss on Ignition	Soil	BS EN 12457	16.9	%
BTEX	Soil	BS EN 12457	14.0	%
Sum of PCBs	Soil	BS EN 12457	21.1	%
Mineral Oil	Soil	BS EN 12457	9.0	%
Total PAH	Soil	BS EN 12457	17.9	%
pH	Soil	BS EN 12457	0.282	Units
Acid Neutralisation Capacity	Soil	BS EN 12457	18.0	%
Arsenic	Leachate	BS EN 12457	19.5	%
Barium	Leachate	BS EN 12457	12.2	%
Cadmium	Leachate	BS EN 12457	17.2	%
Chromium	Leachate	BS EN 12457	20.7	%
Copper	Leachate	BS EN 12457	14.1	%
Mercury	Leachate	BS EN 12457	16.7	%
Molybdenum	Leachate	BS EN 12457	13.3	%
Nickel	Leachate	BS EN 12457	14.0	%
Lead	Leachate	BS EN 12457	12.1	%
Antimony	Leachate	BS EN 12457	16.1	%
Selenium	Leachate	BS EN 12457	15.5	%
Zinc	Leachate	BS EN 12457	14.0	%
Chloride	Leachate	BS EN 12457	15.7	%
Fluoride	Leachate	BS EN 12457	19.1	%
Sulphate	Leachate	BS EN 12457	27.6	%
TDS	Leachate	BS EN 12457	10.0	%
Phenol Index	Leachate	BS EN 12457	12.9	%
DOC	Leachate	BS EN 12457	20.4	%
Clay Content	Soil	BS 3882: 2015	15.0	%
Silt Content	Soil	BS 3882: 2015	14.0	%
Sand Content	Soil	BS 3882: 2015	13.0	%
Loss on Ignition	Soil	BS 3882: 2015	16.9	%
pH	Soil	BS 3882: 2015	0.282	Units
Carbonate	Soil	BS 3882: 2015	12.0	%
Total Nitrogen	Soil	BS 3882: 2015	12.0	%
Phosphorus (Extractable)	Soil	BS 3882: 2015	24.0	%
Potassium (Extractable)	Soil	BS 3882: 2015	20.0	%
Magnesium (Extractable)	Soil	BS 3882: 2015	26.0	%
Zinc	Soil	BS 3882: 2015	19.8	%
Copper	Soil	BS 3882: 2015	23.2	%
Nickel	Soil	BS 3882: 2015	32.6	%
Available Sodium	Soil	BS 3882: 2015	23.0	%
Available Calcium	Soil	BS 3882: 2015	23.0	%
Electrical Conductivity	Soil	BS 3882: 2015	10.0	%



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DETS Report No: 23-10079

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614A

Order No: T8614A

Sample Receipt Date: 04/08/2023

Sample Scheduled Date: 04/08/2023

Report Issue Number: 1

Reporting Date: 10/08/2023

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

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Soil Analysis Certificate						
DETS Report No: 23-10079	Date Sampled	21/06/23	20/06/23	21/06/23		
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Broadwater Road, WGC	TP / BH No	DPSH39	WS07	DPSH39		
Project / Job Ref: 13896/T8614A	Additional Refs	FS3	FS4	FS3		
Order No: T8614A	Depth (m)	3.80	3.30	6.00		
Reporting Date: 10/08/2023	DETS Sample No	668346	668347	668348		

Determinand	Unit	RL	Accreditation	(n)		
pH	pH Units	N/a	MCERTS	6.7	5.4	7.3
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	97	1140	26
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.10	1.14	0.03
Organic Matter (SOM)	%	< 0.1	MCERTS	0.7	1.1	0.6
Arsenic (As)	mg/kg	< 2	MCERTS	39	41	9
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.9	0.7	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	21	22	16
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	28	22	13
Lead (Pb)	mg/kg	< 3	MCERTS	21	24	10
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	51	48	20
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2
Zinc (Zn)	mg/kg	< 3	MCERTS	225	213	47

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
 Subcontracted analysis (S)

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 23-10079	Date Sampled	21/06/23	20/06/23	21/06/23		
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Broadwater Road, WGC	TP / BH No	DPSH39	WS07	DPSH39		
Project / Job Ref: 13896/T8614A	Additional Refs	FS3	FS4	FS3		
Order No: T8614A	Depth (m)	3.80	3.30	6.00		
Reporting Date: 10/08/2023	DETS Sample No	668346	668347	668348		

Determinand	Unit	RL	Accreditation	(n)			
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	

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Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 23-10079	Date Sampled	21/06/23	20/06/23	21/06/23		
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Broadwater Road, WGC	TP / BH No	DPSH39	WS07	DPSH39		
Project / Job Ref: 13896/T8614A	Additional Refs	FS3	FS4	FS3		
Order No: T8614A	Depth (m)	3.80	3.30	6.00		
Reporting Date: 10/08/2023	DETS Sample No	668346	668347	668348		

Determinand	Unit	RL	Accreditation	(n)			
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	3	< 2	
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	30	< 2	
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	142	< 3	
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	116	< 3	
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	17	< 10	
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	308	< 21	
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	9	< 2	
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	22	< 3	
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	31	< 21	
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	339	< 42	

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-10079	Date Sampled	21/06/23	20/06/23	21/06/23		
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Broadwater Road, WGC	TP / BH No	DPSH39	WS07	DPSH39		
Project / Job Ref: 13896/T8614A	Additional Refs	FS3	FS4	FS3		
Order No: T8614A	Depth (m)	3.80	3.30	6.00		
Reporting Date: 10/08/2023	DETS Sample No	668346	668347	668348		

Determinand	Unit	RL	Accreditation	(n)			
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	

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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 23-10079	
South West Geotechnical Ltd	
Site Reference: Broadwater Road, WGC	
Project / Job Ref: 13896/T8614A	
Order No: T8614A	
Reporting Date: 10/08/2023	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
\$ 668346	DPSH39	FS3	3.80	13.2	Light brown sandy clay with stones
\$ 668347	WS07	FS4	3.30	11.8	Light brown sandy gravel with stones
\$ 668348	DPSH39	FS3	6.00	9.6	Light brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{U/5}

\$ samples exceeded recommended holding times



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 23-10079

South West Geotechnical Ltd

Site Reference: Broadwater Road, WGC

Project / Job Ref: 13896/T8614A

Order No: T8614A

Reporting Date: 10/08/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



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List of HWOL Acronyms and Operators	
DETS Report No:	23-10079
South West Geotechnical Ltd	
Site Reference:	Broadwater Road, WGC
Project / Job Ref:	13896/T8614A
Order No:	T8614A
Reporting Date:	10/08/2023

Acronym	Description
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
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

South West Geotechnical Ltd

Geotechnical & Environmental Consultants - Site Investigation Services

Unit 3, Brooklands, Howden Road, Tiverton, EX16 5HW. Tel: 01884 252444

Email: mail@swgeotech.co.uk

Job Name: Broadwater Road

Job Number: 13896

Statistical Assessment - Mean Value Test - Made Ground

[illegible]

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Email: mail@swgeotech.co.uk

Job Name: Broadwater Road

Job Number: 13896

Statistical Assessment - Maximum Value Test - Made Ground

[illegible]

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



ZU1QR-4SDOD-W4Q2N

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Job name

23-08831.1

Description/Comments

Project

13896 a

Site

Broadwater Road

Classified by

Name:

Zoe Brown

Date:

17 Aug 2023 10:50 GMT

Telephone:

Company:

South West Geotechnical Ltd

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

7 - Disposal of Waste

Address of the waste

29 Broadwater Road, Welwyn Garden City

Post Code AL7 3BQ

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Redevelopment of site for residential purposes

Description of the specific process, sub-process and/or activity that created the waste

Waste created during redevelopment

Description of the waste

Sandy clay and gravel with stones.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	BH01-0.75-21/06/2023	0.75	Non Hazardous		3
2	BH01-1.75-21/06/2023	1.75	Non Hazardous		5
3	BH02-0.50-19/06/2023	0.50	Non Hazardous		7
4	BH02-1.00-19/06/2023	1.00	Non Hazardous		9
5	BH03-0.40-23/06/2023	0.40	Non Hazardous		11
6	WS01-0.50-22/06/2023	0.50	Non Hazardous		13
7	WS02-0.90-20/06/2023	0.90	Non Hazardous		15
8	WS03-0.60-20/06/2023	0.60	Non Hazardous		17
9	WS09-0.80-20/06/2023	0.80	Non Hazardous		20

Related documents

#	Name	Description
1	23-08831.1.hwol	DETS South .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Zoe Brown

Created date: 17 Aug 2023 10:50 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	22
Appendix B: Rationale for selection of metal species	23
Appendix C: Version	24

Classification of sample: BH01-0.75-21/06/2023

**Non Hazardous Waste**Classified as **17 05 04**
in the List of Waste**Sample details**

Sample name:	LoW Code:
BH01-0.75-21/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.75 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
6.5%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 6.5% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic trioxide }				38 mg/kg	1.32	46.911 mg/kg	0.00469 %	✓	
		033-003-00-0	215-481-4	1327-53-3							
2		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				23 mg/kg	1.462	31.431 mg/kg	0.00314 %	✓	
			215-160-9	1308-38-9							
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
		024-017-00-8									
5		copper { dicopper oxide; copper (I) oxide }				23 mg/kg	1.126	24.212 mg/kg	0.00242 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
6		lead { lead chromate }			1	19 mg/kg	1.56	27.71 mg/kg	0.00178 %	✓	
		082-004-00-2	231-846-0	7758-97-6							
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
		080-010-00-X	231-299-8	7487-94-7							
8		nickel { nickel chromate }				35 mg/kg	2.976	97.398 mg/kg	0.00974 %	✓	
		028-035-00-7	238-766-5	14721-18-7							
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
		028-031-00-5	239-125-2	15060-62-5							
10		zinc { zinc chromate }				192 mg/kg	2.774	498.015 mg/kg	0.0498 %	✓	
		024-007-00-3	236-878-9	13530-65-9							
11		TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
				TPH							
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X	216-653-1	1634-04-4							
13		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		601-020-00-8	200-753-7	71-43-2							
14		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3							
15		ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	 pH PH				9.3 pH		9.3 pH	9.3 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0772 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH01-1.75-21/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
BH01-1.75-21/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.75 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
11%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				39 mg/kg	1.32	45.828 mg/kg	0.00458 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				21 mg/kg	1.462	27.316 mg/kg	0.00273 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				26 mg/kg	1.126	26.053 mg/kg	0.00261 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	19 mg/kg	1.56	26.376 mg/kg	0.00169 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				30 mg/kg	2.976	79.466 mg/kg	0.00795 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				217 mg/kg	2.774	535.771 mg/kg	0.0536 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				3 mg/kg	1.884	5.03 mg/kg	0.000503 %			
18	 pH PH				8.4 pH		8.4 pH	8.4 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0791 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH02-0.50-19/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
BH02-0.50-19/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
4.6%	
(wet weight correction)	

Hazard properties

None identified

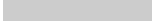
Determinands

Moisture content: 4.6% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				5 mg/kg	1.32	6.298 mg/kg	0.00063 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				5 mg/kg	1.462	6.972 mg/kg	0.000697 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				4 mg/kg	1.126	4.296 mg/kg	0.00043 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	4 mg/kg	1.56	5.952 mg/kg	0.000382 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				6 mg/kg	2.976	17.036 mg/kg	0.0017 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				27 mg/kg	2.774	71.456 mg/kg	0.00715 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	 pH PH				8.1 pH		8.1 pH	8.1 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0167 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH02-1.00-19/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
BH02-1.00-19/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.7%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.7% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				26 mg/kg	1.32	31.342 mg/kg	0.00313 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.3 mg/kg	1.142	0.313 mg/kg	0.0000313 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				27 mg/kg	1.462	36.029 mg/kg	0.0036 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				18 mg/kg	1.126	18.503 mg/kg	0.00185 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	20 mg/kg	1.56	28.482 mg/kg	0.00183 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				26 mg/kg	2.976	70.651 mg/kg	0.00707 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				370 mg/kg	2.774	937.134 mg/kg	0.0937 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	pH		PH		8.5 pH		8.5 pH	8.5 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.117 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH03-0.40-23/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
BH03-0.40-23/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
9%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 9% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				23 mg/kg	1.32	27.634 mg/kg	0.00276 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				0.6 mg/kg	1.142	0.624 mg/kg	0.0000624 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				20 mg/kg	1.462	26.6 mg/kg	0.00266 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide; copper (I) oxide }				32 mg/kg	1.126	32.786 mg/kg	0.00328 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	49 mg/kg	1.56	69.552 mg/kg	0.00446 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				18 mg/kg	2.976	48.751 mg/kg	0.00488 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chromate }				124 mg/kg	2.774	313.035 mg/kg	0.0313 %	✓		
		024-007-00-3	236-878-9	13530-65-9								
11		TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD	
				TPH								
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4								
13		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-020-00-8	200-753-7	71-43-2								
14		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		601-021-00-3	203-625-9	108-88-3								
15		ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-023-00-4	202-849-4	100-41-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
18	 pH PH				8 pH		8 pH	8pH		
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
Total:								0.0551 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS01-0.50-22/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS01-0.50-22/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
4.4%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 4.4% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				36 mg/kg	1.32	45.44 mg/kg	0.00454 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD	
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				29 mg/kg	1.462	40.52 mg/kg	0.00405 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide; copper (I) oxide }				10 mg/kg	1.126	10.763 mg/kg	0.00108 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	11 mg/kg	1.56	16.403 mg/kg	0.00105 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				24 mg/kg	2.976	68.287 mg/kg	0.00683 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chromate }				88 mg/kg	2.774	233.383 mg/kg	0.0233 %	✓		
		024-007-00-3	236-878-9	13530-65-9								
11		TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD	
				TPH								
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4								
13		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-020-00-8	200-753-7	71-43-2								
14		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		601-021-00-3	203-625-9	108-88-3								
15		ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-023-00-4	202-849-4	100-41-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	pH PH				8.2 pH		8.2 pH	8.2 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
35	polychlorobiphenyls; PCB 602-039-00-4	215-648-1	1336-36-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0466 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS02-0.90-20/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS02-0.90-20/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.90 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
9.1%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 9.1% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				44 mg/kg	1.32	52.808 mg/kg	0.00528 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				32 mg/kg	1.462	42.514 mg/kg	0.00425 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				19 mg/kg	1.126	19.445 mg/kg	0.00194 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	21 mg/kg	1.56	29.775 mg/kg	0.00191 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				24 mg/kg	2.976	64.93 mg/kg	0.00649 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				123 mg/kg	2.774	310.169 mg/kg	0.031 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	 pH PH				7.5 pH		7.5 pH	7.5 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0566 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS03-0.60-20/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS03-0.60-20/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
3.5%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 3.5% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				39 mg/kg	1.32	49.69 mg/kg	0.00497 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				9.5 mg/kg	1.142	10.472 mg/kg	0.00105 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				25 mg/kg	1.462	35.26 mg/kg	0.00353 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide; copper (I) oxide }				30 mg/kg	1.126	32.594 mg/kg	0.00326 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	25 mg/kg	1.56	37.631 mg/kg	0.00241 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				36 mg/kg	2.976	103.395 mg/kg	0.0103 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chromate }				199 mg/kg	2.774	532.733 mg/kg	0.0533 %	✓		
		024-007-00-3	236-878-9	13530-65-9								
11		TPH (C6 to C40) petroleum group				83 mg/kg		80.095 mg/kg	0.00801 %	✓		
				TPH								
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4								
13		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-020-00-8	200-753-7	71-43-2								
14		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD	
		601-021-00-3	203-625-9	108-88-3								
15		ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD	
		601-023-00-4	202-849-4	100-41-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	 pH PH				10.7 pH		10.7 pH	10.7 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0883 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because **No liquid phase.**

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00801%)

Classification of sample: WS09-0.80-20/06/2023

**Non Hazardous Waste**Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS09-0.80-20/06/2023	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.80 m	
Moisture content:	
17.1%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.1% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				20 mg/kg	1.32	21.891 mg/kg	0.00219 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				28 mg/kg	1.462	33.926 mg/kg	0.00339 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				21 mg/kg	1.126	19.601 mg/kg	0.00196 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	12 mg/kg	1.56	15.517 mg/kg	0.000995 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				19 mg/kg	2.976	46.879 mg/kg	0.00469 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				51 mg/kg	2.774	117.288 mg/kg	0.0117 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
16		xylene				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1]	95-47-6 [1]								
		203-396-5 [2]	106-42-3 [2]								
		203-576-3 [3]	108-38-3 [3]								
		215-535-7 [4]	1330-20-7 [4]								
17		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
		006-007-00-5									
18		pH				7 pH		7 pH	7pH		
				PH							
19		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3							
20		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8							
21		acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9							
22		fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7							
23		phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8							
24		anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7							
25		fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0							
26		pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0							
27		benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3							
28		chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9							
29		benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2							
30		benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9							
31		benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8							
32		indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5							
33		dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3							
34		benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2							
Total:									0.0306 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

pH (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▪ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4

Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

Additional Hazard Statement(s): Carc. 1A; H350

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2023.226.5717.10536 (14 Aug 2023)

HazWasteOnline Database: 2023.226.5717.10536 (14 Aug 2023)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK:

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



29HN2-A2CL0-QQ2DN

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Job name

23-10079.1

Description/Comments

Project

13896

Site

Broadwater

Classified by

Name:

Zoe Brown

Date:

17 Aug 2023 10:24 GMT

Telephone:

Company:

South West Geotechnical Ltd

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

7 - Disposal of Waste

Address of the waste

29 Broadwater Road, Welwyn Garden City

Post Code AL7 3BQ

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Redevelopment of site for residential purposes

Description of the specific process, sub-process and/or activity that created the waste

Waste created during redevelopment

Description of the waste

Sandy gravelly clay

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	DPSH39-3.80-21/06/2023	3.80	Non Hazardous		3
2	WS07-3.30-20/06/2023	3.30	Non Hazardous		5
3	DPSH39-6.00-21/06/2023	6.00	Non Hazardous		8

Related documents

#	Name	Description
1	23-10079.1.hwol	DETS South .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Zoe Brown

Created date: 17 Aug 2023 10:24 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	10
Appendix B: Rationale for selection of metal species	11
Appendix C: Version	12

Classification of sample: DPSH39-3.80-21/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
DPSH39-3.80-21/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
3.80 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13.2%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 13.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				39 mg/kg	1.32	44.696 mg/kg	0.00447 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.9 mg/kg	1.142	0.892 mg/kg	0.0000892 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				21 mg/kg	1.462	26.641 mg/kg	0.00266 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				28 mg/kg	1.126	27.364 mg/kg	0.00274 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	21 mg/kg	1.56	28.432 mg/kg	0.00182 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				51 mg/kg	2.976	131.753 mg/kg	0.0132 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				225 mg/kg	2.774	541.791 mg/kg	0.0542 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	pH		PH		6.7 pH		6.7 pH	6.7 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.0848 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS07-3.30-20/06/2023

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS07-3.30-20/06/2023	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
3.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
11.8%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 11.8% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				41 mg/kg	1.32	47.746 mg/kg	0.00477 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.7 mg/kg	1.142	0.705 mg/kg	0.0000705 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				22 mg/kg	1.462	28.36 mg/kg	0.00284 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				22 mg/kg	1.126	21.847 mg/kg	0.00218 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	24 mg/kg	1.56	33.018 mg/kg	0.00212 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				48 mg/kg	2.976	126.003 mg/kg	0.0126 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				213 mg/kg	2.774	521.168 mg/kg	0.0521 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				339 mg/kg		298.998 mg/kg	0.0299 %	✓	
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
16	xylene 601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %			<LOD
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex } 006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	 pH PH				5.4 pH		5.4 pH	5.4 pH			
19	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
20	 acenaphthylene 205-917-1	208-96-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
21	 acenaphthene 201-469-6	83-32-9			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
22	 fluorene 201-695-5	86-73-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	 phenanthrene 201-581-5	85-01-8			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
24	 anthracene 204-371-1	120-12-7			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	 fluoranthene 205-912-4	206-44-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
26	 pyrene 204-927-3	129-00-0			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
27	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
28	chrysene 601-048-00-0	205-923-4	218-01-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
29	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
30	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
31	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
32	 indeno[123-cd]pyrene 205-893-2	193-39-5			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
33	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
34	 benzo[ghi]perylene 205-883-8	191-24-2			<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.108 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because **No liquid phase**

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0299%)

Classification of sample: DPSH39-6.00-21/06/2023



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
DPSH39-6.00-21/06/2023	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
6.00 m	
Moisture content:	
9.6%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 9.6% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				9 mg/kg	1.32	10.742 mg/kg	0.00107 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				16 mg/kg	1.462	21.14 mg/kg	0.00211 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium(VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	13.231 mg/kg	0.00132 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	10 mg/kg	1.56	14.101 mg/kg	0.000904 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				20 mg/kg	2.976	53.811 mg/kg	0.00538 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chromate }				47 mg/kg	2.774	117.868 mg/kg	0.0118 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-023-00-4	202-849-4	100-41-4							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
16		xylene				<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
17	 cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }					<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
18	 pH					7.3 pH		7.3 pH	7.3 pH		
				PH							
19		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
20						<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3							
21		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8							
22		acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9							
23		fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7							
24		phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8							
25		anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7							
26		fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0							
27		pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0							
28		benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3							
29		chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9							
30		benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2							
31		benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9							
32		benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8							
33		indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5							
34		dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3							
		benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2							
Total:									0.0283 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

■ chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H332, Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Resp. Sens. 1; H334, Skin Sens. 1; H317, Repr. 1B; H360FD, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

■ TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Flam. Liq. 3; H226, Asp. Tox. 1; H304, STOT RE 2; H373, Muta. 1B; H340, Carc. 1B; H350, Repr. 2; H361d, Aquatic Chronic 2; H411

■ ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

■ pH (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302, Acute Tox. 1; H330, Acute Tox. 1; H310, Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315

■ acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Aquatic Chronic 2; H411

■ fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

■ phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302, Eye Irrit. 2; H319, STOT SE 3; H335, Carc. 2; H351, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410, Skin Irrit. 2; H315

■ anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

▪ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**
HazWasteOnline Classification Engine Version: 2023.226.5717.10536 (14 Aug 2023)
HazWasteOnline Database: 2023.226.5717.10536 (14 Aug 2023)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021



David Trowbridge
South West Geotechnical Ltd
Unit 3 Brooklands
Howden Road
Tiverton
Devon
EX16 5HW

Derwentside Environmental Testing Services Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 23-11301

Site Reference: Broadwater Road
Project / Job Ref: 13896/T8761
Order No: t8761
Sample Receipt Date: 07/09/2023
Sample Scheduled Date: 07/09/2023
Report Issue Number: 1
Reporting Date: 13/09/2023

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Water Analysis Certificate - TPH CWG Banded					
DETS Report No: 23-11301	Date Sampled	05/09/23	05/09/23		
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied		
Site Reference: Broadwater Road	TP / BH No	WS02	WS09		
Project / Job Ref: 13896/T8761	Additional Refs	W	W		
Order No: t8761	Depth (m)	0.00	0.00		
Reporting Date: 13/09/2023	DETS Sample No	673569	673570		

Determinand	Unit	RL	Accreditation	(hs)			
Aliphatic >C5 - C6 : HS 1D MS AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C6 - C8 : HS 1D MS AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C8 - C10 : EH CU 1D AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C10 - C12 : EH CU 1D AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C12 - C16 : EH CU 1D AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C16 - C21 : EH CU 1D AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic >C21 - C34 : EH CU 1D AL	ug/l	< 10	NONE	< 10	< 10		
Aliphatic (C5 - C34) : HS 1D MS+EH CU 1D AL	ug/l	< 70	NONE	< 70	< 70		
Aromatic >C5 - C7 : HS 1D MS AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C7 - C8 : HS 1D MS AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C8 - C10 : EH CU 1D AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C10 - C12 : EH CU 1D AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C12 - C16 : EH CU 1D AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C16 - C21 : EH CU 1D AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic >C21 - C35 : EH CU 1D AR	ug/l	< 10	NONE	< 10	< 10		
Aromatic (C5 - C35) : HS 1D MS+EH CU 1D AR	ug/l	< 70	NONE	< 70	< 70		
Total >C5 - C35 : HS 1D MS+EH CU 1D Total	ug/l	< 140	NONE	< 140	< 140		

(hs) Please note deviating sample due to head space in container



DETS Ltd
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Water Analysis Certificate - BTEX / MTBE						
DETS Report No: 23-11301	Date Sampled	05/09/23	05/09/23			
South West Geotechnical Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Broadwater Road	TP / BH No	WS02	WS09			
Project / Job Ref: 13896/T8761	Additional Refs	W	W			
Order No: t8761	Depth (m)	0.00	0.00			
Reporting Date: 13/09/2023	DETS Sample No	673569	673570			

Determinand	Unit	RL	Accreditation	(hs)		
Benzene : HS 1D MS	ug/l	< 1	ISO17025	< 1	< 1	
Toluene : HS 1D MS	ug/l	< 5	ISO17025	< 5	< 5	
Ethylbenzene : HS 1D MS	ug/l	< 5	ISO17025	< 5	< 5	
p & m-xylene : HS 1D MS	ug/l	< 10	ISO17025	< 10	< 10	
o-xylene : HS 1D MS	ug/l	< 5	ISO17025	< 5	< 5	
MTBE : HS 1D MS	ug/l	< 10	ISO17025	< 10	< 10	

(hs) Please note deviating sample due to head space in container



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 23-11301

South West Geotechnical Ltd

Site Reference: Broadwater Road

Project / Job Ref: 13896/T8761

Order No: t8761

Reporting Date: 13/09/2023

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered



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List of HWOL Acronyms and Operators

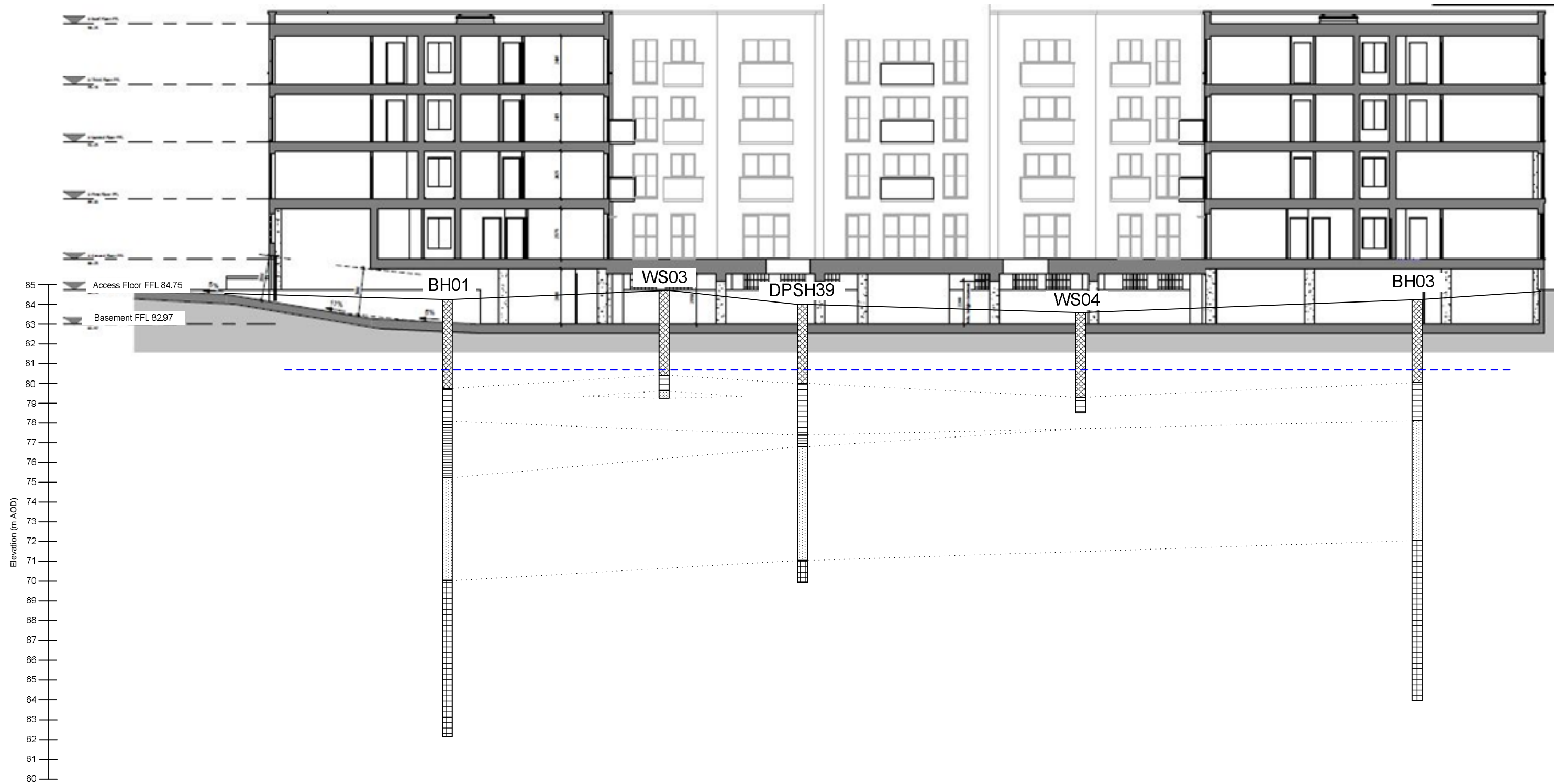
Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total

Det - Acronym
Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Aromatic C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

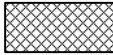
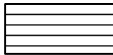
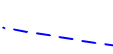


Appendix F

Geological Cross Section



Key

-  Made Ground
-  Glacial Till (Cohesive)
-  Glacial Till (Granular)
-  Glaciofluvial Deposits (Cohesive)
-  Glaciofluvial Deposits (Granular)
-  Seaford Chalk Formation
-  Geological Boundary (inferred)
-  Perched Groundwater Level (inferred)

Base drawing taken from McBains Ltd
Drawing No 60193, Section AA

Borehole Locations are approximate



Broadwater Road

Geological Cross Section

01884 252444	SIZE	JOB NO	DWG NO		REV
	A3	13896	DWG1		0
Drawn: BO	SCALE	1:200 @A3 Approx	16/8/23	SHEET	1 of 1



Appendix G

Falling Head Test Results

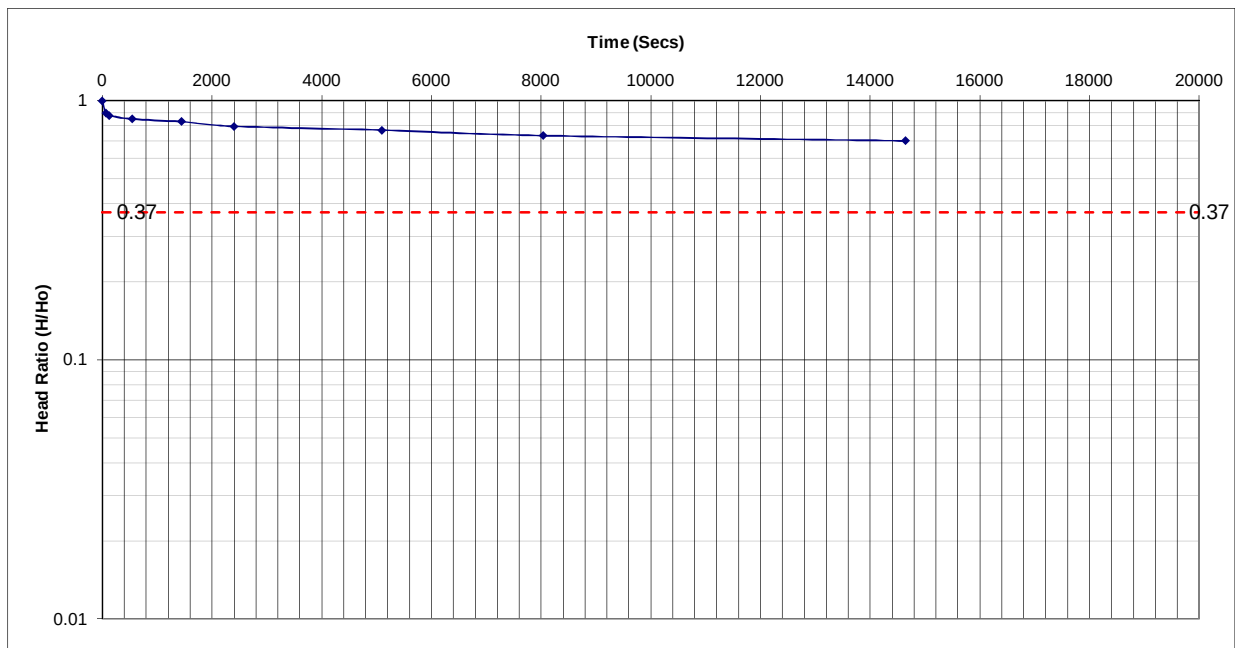
Falling Head Permeability Test

Broadwater Road

Job No. 13896

Ref BS 5930 (1999), Clause 25.4.6.1, Method 1 b (general approach)

Test 1		BH No.		FHT01	
Date	Δ time (min)	Time (Secs)	Level (mbgl)	H (m)	%
22-Jun-23	0	0	0	3	1
	1	60	0.32	2.68	0.89
	2	120	0.37	2.63	0.88
	9	540	0.45	2.55	0.85
	24	1440	0.51	2.49	0.83
	40	2400	0.61	2.39	0.8
	85	5100	0.69	2.31	0.77
	134	8040	0.8	2.2	0.73
	244	14640	0.9	2.1	0.7
		Depth of hole		3 m	
		Depth of casing		0 m	
		Water used		n/a l	
		Hole diameter		67 mm	
		Length of Test		3 m	
		Groundwater level		n/a mbgl (Assumed)	



$$k = \frac{A}{F(t_2 - t_1)} \log e \frac{H_1}{H_2} = 2.05E-08 \text{ m/s} *$$

$$F = \frac{2 \pi L}{\log e \left[\left(\frac{L}{D} \right) + \sqrt{1 + \left(\frac{L}{D} \right)^2} \right]} = \frac{18.84955592}{\log e 89.5634} = 4.193499$$

D 0.067 m
A 0.003526 m²
L 3 m
t₁ 0.01 s
t₂ 14640 s
H₁ 3 m
H₂ 2.1 m

*Permeability estimated, water level did not reduce to 0.37% in accordance with BS

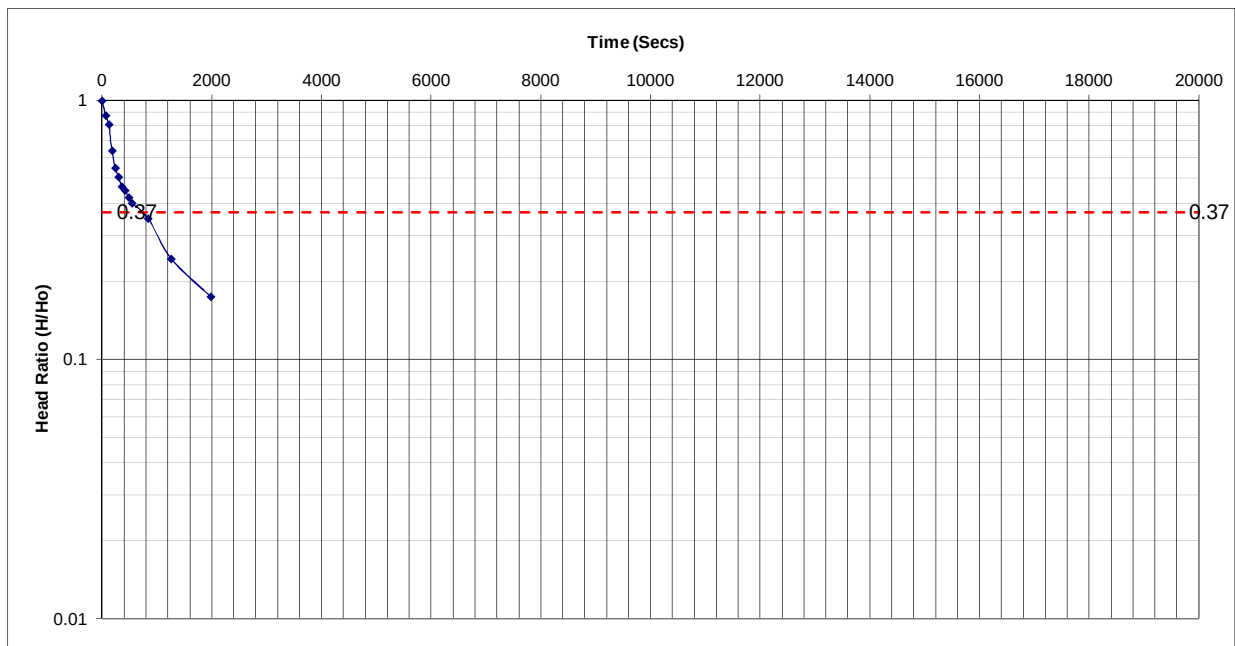
Falling Head Permeability Test

Broadwater Road

Job No. 13896

Ref BS 5930 (1999), Clause 25.4.6.1, Method 1 b (general approach)

Date	Test 1		Level (mbgl)	H (m)	%	BH No.	FHT03
	Δ time (min)	Time (Secs)					
21-Jun-23	0	0	0.14	2.86	1	Depth of hole	3 m
	1	60	0.5	2.5	0.87	Depth of casing	0 m
	2	120	0.69	2.31	0.81	Water used	n/a l
	3	180	1.17	1.83	0.64	Hole diameter	67 mm
	4	240	1.43	1.57	0.55	Length of Test	2.86 m
	5	300	1.55	1.45	0.51	Groundwater level	n/a mbgl (Assumed)
	6	360	1.67	1.33	0.47		
	7	420	1.71	1.29	0.45		
	8	480	1.79	1.21	0.42		
	9	540	1.85	1.15	0.4		
	14	840	2.15	1	0.35		
	21	1260	2.3	0.7	0.24		
	33	1980	2.5	0.5	0.17		



$$k = \frac{A}{F(t_2 - t_1)} \log e \frac{H_1}{H_2} = 1.19E-06 \text{ m/s} *$$

$$F = \frac{2 \pi L}{\log e [(L/D) + \sqrt{1 + (L/D)^2}]} = \frac{17.96990998}{\log e 85.38485} = 4.040753$$

D	0.067 m
A	0.003526 m ²
L	2.86 m
t1	0.01 s
t2	700 s
H1	2.86 m
H2	1.1 m

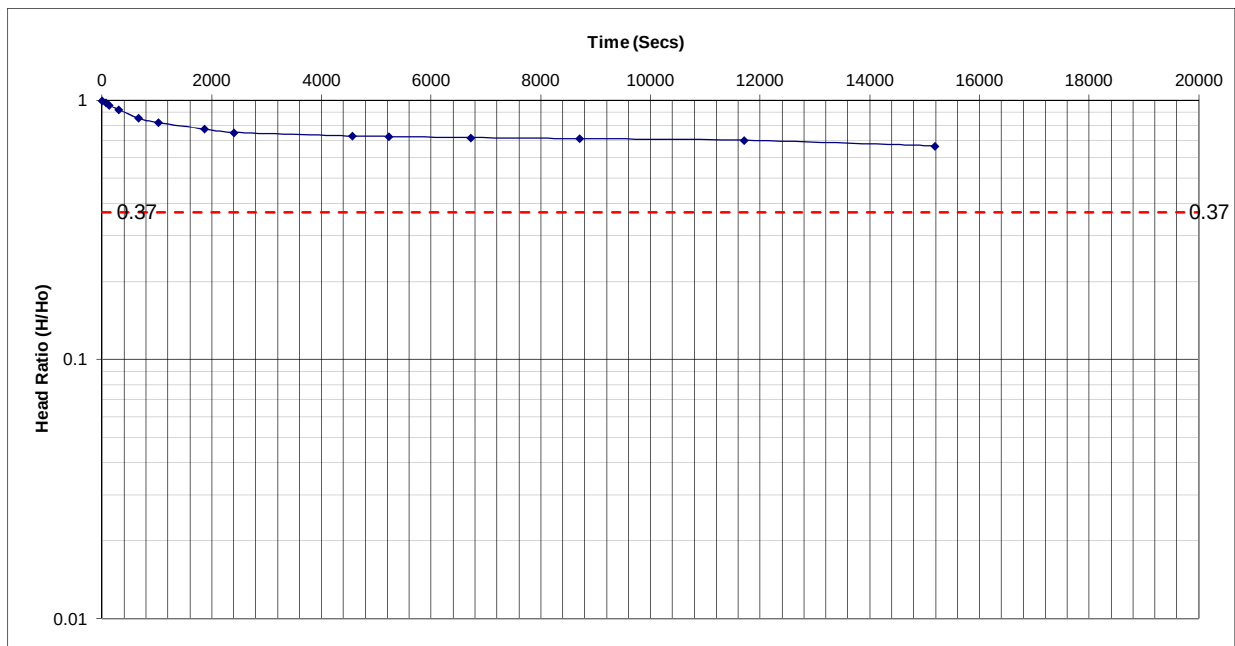
Falling Head Permeability Test

Broadwater Road

Job No. 13896

Ref BS 5930 (1999), Clause 25.4.6.1, Method 1 b (general approach)

Test 2			BH No.			FHT03	
Date	Δ time (min)	Time (Secs)	Level (mbgl)	H (m)	%		
21-Jun-23	0	0	0.05	2.95	1	Depth of hole	3 m
	1	60	0.1	2.9	0.98	Depth of casing	0 m
	2	120	0.17	2.83	0.96	Water used	n/a l
	5	300	0.28	2.72	0.92	Hole diameter	67 mm
	11	660	0.48	2.52	0.85	Length of Test	2.95 m
	17	1020	0.58	2.42	0.82	Groundwater level	n/a mbgl (Assumed)
	31	1860	0.71	2.29	0.78		
	40	2400	0.78	2.22	0.75		
	76	4560	0.85	2.15	0.73		
	87	5220	0.86	2.14	0.73		
	112	6720	0.88	2.12	0.72		
	145	8700	0.9	2.1	0.71		
	195	11700	0.93	2.07	0.7		
	253	15180	1.03	1.97	0.67		



$$k = \frac{A}{F(t_2 - t_1)} \log e \frac{H_1}{H_2} = 2.27E-08 \text{ m/s}^*$$

$$F = \frac{2 \pi L}{\log e \left[\left(L/D \right) + \sqrt{1 + \left(L/D \right)^2} \right]} = \frac{18.53539666}{\log e 88.07106} = 4.13908$$

D	0.067 m
A	0.003526 m2
L	2.95 m
t1	0.01 s
t2	15180 s
H1	2.95 m
H2	1.97 m

*Permeability estimated, water level did not reduce to 0.37% in accordance with BS

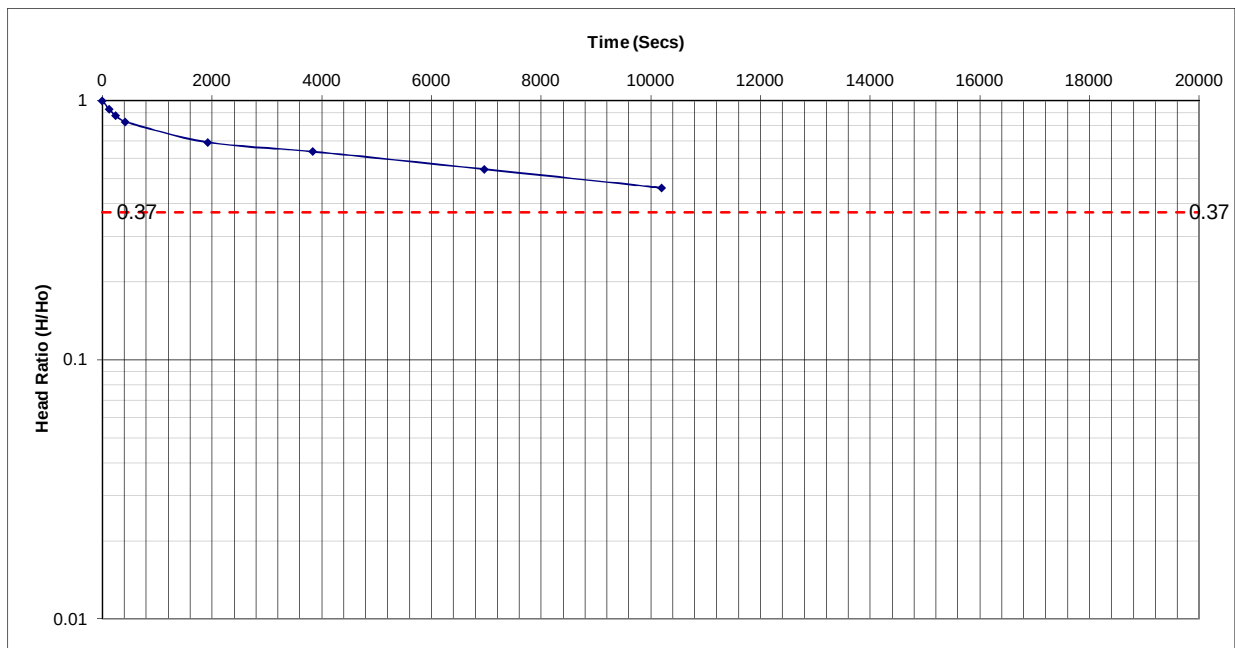
Falling Head Permeability Test

Broadwater Road

Job No. 13896

Ref BS 5930 (1999), Clause 25.4.6.1, Method 1 b (general approach)

Test 1		BH No.		FHT05	
Date	Δ time (min)	Time (Secs)	Level (mbgl)	H (m)	%
21-Jun-23	0	0	0.03	2.17	1
	2	120	0.19	2.01	0.93
	4	240	0.3	1.9	0.88
	7	420	0.4	1.8	0.83
	32	1920	0.7	1.5	0.69
	64	3840	0.82	1.38	0.64
	116	6960	1.02	1.18	0.54
	170	10200	1.2	1	0.46
				Depth of hole	2.2 m
				Depth of casing	0 m
				Water used	n/a l
				Hole diameter	78 mm
				Length of Test	2.17 m
				Groundwater level	n/a mbgl (Assumed)



$$k = \frac{A}{F(t_2 - t_1)} \log e \frac{H_1}{H_2} = 1.07E-07 \text{ m/s} *$$

$$F = \frac{2 \pi L}{\log e \left[\left(\frac{L}{D} \right) + \sqrt{1 + \left(\frac{L}{D} \right)^2} \right]} = \frac{13.63451212}{\log e 55.65899} = 3.392308$$

D 0.078 m
A 0.004778 m²
L 2.17 m
t₁ 0.01 s
t₂ 10200 s
H₁ 2.17 m
H₂ 1 m

*Permeability estimated, water level did not reduce to 0.37% in accordance with BS

Appendix H

Gas and Groundwater Monitoring Results



Summary of Gas / Water Monitoring Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Date of test	05/09/2023
Project Name	29 Broadwater Road
Project No.	13896
Client	Hightown Housing Association
Client Job No.	

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0	0	3.3	4.8	16.2	15.6	1027/1019	1008	0	0		dry	4.86
WS02	0	0	3	1.9	16.7	15.5	1027/1019	1009	0	0		3.75	4.19
WS09	0	0	1.4	3	15.5	8.2	1027/1019	1007	0	0		3.56	4..04

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Dry	Precipitation (None, drizzle, moderate, or heavy)	Light to slight	Instrument and serial no.	
Wind conditions (Calm, light, moderate, or strong)	Moderate	Certificate Number		Water Sampling Undertaken	Yes



Summary of Gas / Water Monitoring Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Date of test	22/09/2023
Project Name	29 Broadwater Road
Project No.	13896
Client	Hightown Housing Association
Client Job No.	

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0	0	0.3	4.3	19.5	16.9	997/995	990	0	0		Dry	4.86
WS02	0	0	3.3	1.1	17.8	14.1	997/995	990	0	0		Dry	4.19
WS09	0	0	1.5	3.7	14	6.5	997/995	990	0	0		0.69	4..04

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Wet	Precipitation (None, drizzle, moderate, or heavy)	Light	Instrument and serial no.	
Wind conditions (Calm, light, moderate, or strong)	Light	Certificate Number		Water Sampling Undertaken	No



Summary of Gas / Water Monitoring Results

Unit 3 Brooklands,
Howden Road,
Tiverton,
Devon EX16 5HW

Date of test	06/10/2023
Project Name	29 Broadwater Road
Project No.	13896
Client	Hightown Housing Association
Client Job No.	

Borehole No.	CH4 (% vol. in air) Peak	CH4 (% vol. in air) Steady	CO2 (% vol. in air) Peak	CO2 (% vol. in air) Steady	O2 (% vol. in air) Peak	O2 (% vol. in air) Steady	Pressure (two days preceeding)	Pressure (mb)	Flow Peak (l/hr)	Flow Steady (l/hr)	VOC (ppm)	Water Level (mbgl)	Depth of Borehole (m)
WS01	0	0	2.3	2.3	17.8	18.1	1026/1025	1013	0	0		3.42	4.01
WS02	0	0	3.6	3.6	5.8	5.8	1026/1025	1012	0	0		3.55	4.15
WS09	0	0	2.7	2.5	13.3	13.3	1026/1025	1011	0	0		4.61	4.87

When water level is recorded as "-", this signifies that no water was present

State of ground (dry, moist or wet)	Wet	Precipitation (None, drizzle, moderate, or heavy)	Slight	Instrument and serial no.	
Wind conditions (Calm, light, moderate, or strong)	Calm	Certificate Number		Water Sampling Undertaken	No

Appendix I

Proposed Development Plans