

Analytical Report Number : 22-98006

Project / Site name: St Michaels Manchester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2507016	WS03	None Supplied	3	Brown sandy clay.
2507017	BH04	None Supplied	4	Brown sand with gravel.
2507018	BH05	None Supplied	3	Brown sandy clay.
2507019	BH04	None Supplied	3	Brown sandy clay.
2507020	BH05	None Supplied	4	Brown sandy clay with stones.

Analytical Report Number : 22-98006

Project / Site name: St Michaels Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES.	In-house method based on TRL 447	L038-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Ammonium as NH4 in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the colorimetric salicylate/nitroprusside method, 10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Total Sulphate in soil as %	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Total Sulphur in soil as %	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry.	In-house method based on Examination of Water and Wastewater & Polish Standard Method PN-82/C-04579.08, 2:1 extraction.	L078-PL	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser.	In house method.	L082-PL	D	MCERTS
Sulphate, water soluble, in soil	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture

correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by

the client. The instructed on date indicates the date on which this information was provided to the laboratory.

TEST REPORT

Client Brownfield Solutions

Address William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

Contract C5128

Job Number MRN 4268/18
Date of Issue 20 December 2022
Page 1 of 17

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
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TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE LABEL	BH04	DATE SAMPLED	22-Nov-22
LAB SAMPLE No	119427-119441	DATE RECEIVED	01-Dec-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	As client and site above

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
28.32-28.45	D	88.0	81.0	6.9	7744.00	88.00	0.89	1.29	1.15
31.10-31.26	D	88.0		8.4	7744.00	88.00	1.08	1.29	1.40
43.60-43.72	D	88.0		15.2	7744.00	88.00	1.96	1.29	2.53
11.31-11.40	D	89.0		8.8	7921.00	89.00	1.11	1.30	1.44
21.82-21.94	D	88.0		14.2	7744.00	88.00	1.83	1.29	2.36
42.00-42.12	D	87.0	60.0	7.8	7569.00	87.00	1.03	1.28	1.32
17.40-17.50	D	89.0		11.0	7921.00	89.00	1.39	1.30	1.80
19.05-19.19	D	89.0		12.2	7921.00	89.00	1.54	1.30	2.00
38.20-38.40	D	88.0		14.8	7744.00	88.00	1.91	1.29	2.46
9.90-10.00	A	88.0		11.2	9075.65	95.27	1.23	1.34	1.65
23.50-23.60	D	89.0	60.0	10.4	7921.00	89.00	1.31	1.30	1.70
36.20-36.43	D	88.0		10.8	7744.00	88.00	1.39	1.29	1.80
15.60-15.74	D	88.0		8.0	7744.00	88.00	1.03	1.29	1.33
5.70-5.77	A	88.0		10.0	6722.70	81.99	1.49	1.25	1.86
33.87-34.00	D	88.0		14.8	7744.00	88.00	1.91	1.29	2.46
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00

Test Type *
A Axial Test D Diametral Test
B Block Test I Irregular Lump Test

*W Entry required if test type is not Diametral

REMARKS

SIGNED 
NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 20-Dec-22

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE LABEL	BH05	DATE SAMPLED	25-Nov-22
LAB SAMPLE No	119442-119456	DATE RECEIVED	01-Dec-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	As client and site above

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
21.50-21.58	A	88.0	75.0	16.8	8403.38	91.67	2.00	1.31	2.63
33.50-33.57	D	89.0		3.6	7921.00	89.00	0.45	1.30	0.59
5.40-5.50	D	89.0		3.4	7921.00	89.00	0.43	1.30	0.56
17.60-17.70	D	89.0		6.2	7921.00	89.00	0.78	1.30	1.01
8.35-8.45	D	88.0		2.8	7744.00	88.00	0.36	1.29	0.47
10.35-10.45	D	88.0		6.8	7744.00	88.00	0.88	1.29	1.13
39.30-39.38	A	88.0	61.0	9.8	6834.75	82.67	1.43	1.25	1.80
34.10-34.22	D	88.0		5.0	7744.00	88.00	0.65	1.29	0.83
22.80-22.92	D	88.0		3.8	7744.00	88.00	0.49	1.29	0.63
43.10-43.22	D	89.0		5.6	7921.00	89.00	0.71	1.30	0.92
15.60-15.73	D	88.0		6.2	7744.00	88.00	0.80	1.29	1.03
28.00-28.10	A	88.0	70.0	8.0	7843.16	88.56	1.02	1.29	1.32
30.70-30.82	D	88.0		6.2	7744.00	88.00	0.80	1.29	1.03
25.60-25.75	D	88.0		6.8	7744.00	88.00	0.88	1.29	1.13
42.10-42.22	D	88.0		5.8	7744.00	88.00	0.75	1.29	0.97
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00

Test Type * *W Entry required if test type is not Diametral

A Axial Test D Diametral Test

B Block Test I Irregular Lump Test

REMARKS

SIGNED 

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 20-Dec-22

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 26.50-26.81	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119420	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	144.2	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	23.7
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COMPRESSIVE STRENGTH (MPa)	23.7
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 44.10-44.41	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119421	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	64.4	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	10.6
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COMPRESSIVE STRENGTH (MPa)	10.6
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 25.83-26.17	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119422	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	112.3	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	18.5
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COMPRESSIVE STRENGTH (MPa)	18.5
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

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DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 10.41-10.71	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119423	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	89
LENGTH AFTER PREPARATION (mm)	178	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	92.9	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	14.9
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COMPRESSIVE STRENGTH (MPa)	14.9
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 16.83-17.00	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119424	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	76.8	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	12.6
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COMPRESSIVE STRENGTH (MPa)	12.6
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 37.50-37.74	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119425	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	112.6	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	18.5
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COMPRESSIVE STRENGTH (MPa)	18.5
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH04 7.40-7.82	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119426	DATE SAMPLED	22-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	122.7	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	20.2
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COMPRESSIVE STRENGTH (MPa)	20.2
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 19.14-19.40	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119457	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	95.6	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	15.7
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COMPRESSIVE STRENGTH (MPa)	15.7
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 6.76-7.00	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119458	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	144.1	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	23.7
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COMPRESSIVE STRENGTH (MPa)	23.7
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 16.30-16.63	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119459	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	67.1	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	11.0
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COMPRESSIVE STRENGTH (MPa)	11.0
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 12.75-13.00	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119460	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
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COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	153.0	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	25.2
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COMPRESSIVE STRENGTH (MPa)	25.2
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 37.50-37.75	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119461	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
--------------------------------	--

COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	127.3	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	20.9
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COMPRESSIVE STRENGTH (MPa)	20.9
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 44.50-44.80	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119462	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
--------------------------------	--

COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	131.3	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	21.6
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COMPRESSIVE STRENGTH (MPa)	21.6
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4268/18

SAMPLE REFERENCE	BH05 28.30-28.62	DATE RECEIVED	01-Dec-22
SAMPLE NUMBER	119463	DATE SAMPLED	25-Nov-22
DATE TESTED	15-Dec-22	SAMPLED BY	Client

DIMENSIONS

TESTED BY	MW	DIAMETER (mm)	88
LENGTH AFTER PREPARATION (mm)	176	LENGTH/DIAMETER RATIO	2.00

METHOD OF END PREPARATION	Saw / Grinding	TIME IN WATER PRIOR TO TEST	0 Hours
DATE OF DRILLING	Not advised	DRILLED BY	Others
MATERIAL	Rock Core	SAMPLE LOCATION	Not advised

DESCRIPTION OF CORE AFTER TEST	Split vertically from top to bottom, with no visible end effects
--------------------------------	--

COMPRESSIVE STRENGTH

LOAD AT FAILURE (kN)	101.4	MEASURED COMPRESSIVE STRENGTH (N/mm ²)	16.7
----------------------	-------	--	------

COMPRESSIVE STRENGTH (MPa)	16.7
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Comments / Deviation from standard method / Abnormalities noted during visual inspection.

None

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 20-Dec-22

TEST REPORT

Client Brownfield Solutions

Address William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

Contract C5128

Job Number MRN 4573/1
Date of Issue 10 January 2023
Page 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



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Also at: London: 020 8523 1999

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ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D _e ² (mm ²)	D _e (mm)	I _s (MPa)	F	I _{s(50)} (MPa)
5.43-5.50	A	87.0	63.0	1.2	6978.63	83.54	0.17	1.26	0.22
9.93-10.00	A	87.0	55.0	2.4	6092.45	78.05	0.39	1.22	0.48
13.00-13.08	A	87.0	76.0	2.6	8418.66	91.75	0.31	1.31	0.41
16.50-16.60	D	87.0		1.5	7569.00	87.00	0.20	1.28	0.25
19.00-19.10	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
21.50-21.60	D	87.0		1.0	7569.00	87.00	0.13	1.28	0.17
24.00-24.08	A	86.0	76.0	3.0	8321.89	91.22	0.36	1.31	0.47
26.30-26.43	D	87.0		2.1	7569.00	87.00	0.28	1.28	0.36
28.90-29.00	D	87.0		2.4	7569.00	87.00	0.32	1.28	0.41
32.15-32.25	D	87.0		1.3	7569.00	87.00	0.17	1.28	0.22
35.85-35.95	A	87.0	78.0	1.6	8640.20	92.95	0.19	1.32	0.24
36.80-36.90	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
41.50-41.60	D	87.0		0.9	7569.00	87.00	0.12	1.28	0.15
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
Test Type *						*W	Entry required if test type is not Diametral		
A	Axial Test	D	Diametral Test						
B	Block Test	I	Irregular Lump Test						

SIGNED

DATE 10-Jan-23

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

DATE RECEIVED	21-Dec-22	DATE SAMPLED	18-Nov-22
DATE TESTED	06-Jan-23	SAMPLED BY	Client
MATERIAL	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
119832	BH01 6.80-7.00	MW	87	174	2.00	Saw / Grinding	74.6	12.5	Split vertically top to bottom with no visible end defects
119835	BH01 12.57-12.80	MW	87	174	2.00	Saw / Grinding	100.4	16.9	Split vertically top to bottom with no visible end defects
119838	BH01 17.50-17.80	MW	87	174	2.00	Saw / Grinding	47.5	8.0	Split vertically top to bottom with no visible end defects
119841	BH01 22.70-22.95	MW	87	174	2.00	Saw / Grinding	119.1	20.0	Split vertically top to bottom with no visible end defects
119844	BH01 27.20-27.40	MW	87	174	2.00	Saw / Grinding	132.5	22.3	Split vertically top to bottom with no visible end defects
119847	BH01 34.20-34.40	MW	87	174	2.00	Saw / Grinding	80.8	13.6	Split vertically top to bottom with no visible end defects
119850	BH01 39.55-39.75	MW	87	174	2.00	Saw / Grinding	109.1	18.4	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 10-Jan-23

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D _e ² (mm ²)	D _e (mm)	I _s (MPa)	F	I _{s(50)} (MPa)
15.00-15.10	A	86.0	75.0	2.4	8212.40	90.62	0.29	1.31	0.38
13.15-13.27	D	87.0		1.4	7569.00	87.00	0.18	1.28	0.24
6.80-6.88	A	86.0	79.0	2.6	8650.39	93.01	0.30	1.32	0.40
10.20-10.31	D	87.0		2.2	7569.00	87.00	0.29	1.28	0.37
16.90-17.00	D	86.0		1.6	7396.00	86.00	0.22	1.28	0.28
18.37-18.50	D	87.0		1.7	7569.00	87.00	0.22	1.28	0.29
17.30-17.40	A	87.0	78.0	3.6	8640.20	92.95	0.42	1.32	0.55
21.00-21.12	D	86.0		1.2	7396.00	86.00	0.16	1.28	0.21
13.20-13.32	D	87.0		1.2	7569.00	87.00	0.16	1.28	0.20
8.25-8.35	D	87.0		0.8	7569.00	87.00	0.11	1.28	0.14
5.66-5.76	D	87.0		0.4	7569.00	87.00	0.05	1.28	0.07
15.66-15.76	D	87.0		1.9	7569.00	87.00	0.25	1.28	0.32
24.10-24.20	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
Test Type *						*W	Entry required if test type is not Diametral		
A	Axial Test	D	Diametral Test						
B	Block Test	I	Irregular Lump Test						

Page 4 of 5

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
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TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

DATE RECEIVED	21-Dec-22	DATE SAMPLED	07-Nov-22
DATE TESTED	06-Jan-23	SAMPLED BY	Client
MATERIAL	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
120011	BH02 16.00-16.30	MW	87	174	2.00	Saw / Grinding	101.4	17.1	Split vertically top to bottom with no visible end defects
120012	BH02 12.00-12.33	MW	87	174	2.00	Saw / Grinding	84.5	14.2	Split vertically top to bottom with no visible end defects
120013	BH02 7.20-7.42	MW	87	174	2.00	Saw / Grinding	76.3	12.8	Split vertically top to bottom with no visible end defects
120021	BH02 18.20-18.42	MW	87	174	2.00	Saw / Grinding	99.2	16.7	Split vertically top to bottom with no visible end defects
120022	BH02 22.10-22.33	MW	87	174	2.00	Saw / Grinding	109.4	18.4	Split vertically top to bottom with no visible end defects
120023	BH02 11.90-12.22	MW	87	174	2.00	Saw / Grinding	102.5	17.2	Split vertically top to bottom with no visible end defects
120024	BH02 9.10-9.35	MW	87	174	2.00	Saw / Grinding	59.1	9.9	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 10-Jan-23

Jack Mather
Brownfield Solutions Ltd
William Smith House
173 - 183 Witton Street
Northwich
Cheshire
CW9 5LP

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

e: j.mather@brownfield-solutions.co.uk

Analytical Report Number : 23-14277

Project / Site name:	St Michaels Manchester	Samples received on:	26/01/2023
Your job number:	C5128	Samples instructed on/ Analysis started on:	26/01/2023
Your order number:	C5128 3694 JM	Analysis completed by:	01/02/2023
Report Issue Number:	1	Report issued on:	02/02/2023
Samples Analysed:	4 soil samples		



Signed:

Adam Fenwick
Technical Reviewer
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 23-14277

Project / Site name: St Michaels Manchester

Your Order No: C5128 3694 JM

Lab Sample Number				2566680	2566681	2566682	2566683
Sample Reference				BH02	BH04	BH05	BH01
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				10.00	20.00	30.00	40.00
Date Sampled				17/11/2022	17/11/2022	17/11/2022	17/11/2022
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	8.6	10	9	11
Total mass of sample received	kg	0.001	NONE	0.9	0.9	0.9	0.9

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	6.4	8.8	9.0	8.7
Water Soluble SO ₄ 10ml extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0026	0.0015	0.0023	0.0054

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 23-14277

Project / Site name: St Michaels Manchester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2566680	BH02	None Supplied	10	Brown sand.
2566681	BH04	None Supplied	20	Brown sand.
2566682	BH05	None Supplied	30	Brown sand.
2566683	BH01	None Supplied	40	Brown sand.

Analytical Report Number : 23-14277

Project / Site name: St Michaels Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC. Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report



Analytical Report Number : 23-14277

Project / Site name: St Michaels Manchester

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis. Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
BH01	None Supplied	S	2566683	c	pH in soil (automated)	L099-PL	c
BH02	None Supplied	S	2566680	c	pH in soil (automated)	L099-PL	c
BH04	None Supplied	S	2566681	c	pH in soil (automated)	L099-PL	c
BH05	None Supplied	S	2566682	c	pH in soil (automated)	L099-PL	c

TEST REPORT

Client Brownfield Solutions

Address William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

Contract C5128

Job Number MRN 4573/1
Date of Issue 10 January 2023
Page 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



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Also at: London: 020 8523 1999

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MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

SAMPLE LABEL	BH01	DATE SAMPLED	18-Nov-22
LAB SAMPLE No	119833-119851	DATE RECEIVED	21-Dec-22
DATE TESTED	04-Jan-23	SAMPLED BY	Client

MATERIAL	Sandstone
ADVISED SOURCE	Site Investigation Samples

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
5.43-5.50	A	87.0	63.0	1.2	6978.63	83.54	0.17	1.26	0.22
9.93-10.00	A	87.0	55.0	2.4	6092.45	78.05	0.39	1.22	0.48
13.00-13.08	A	87.0	76.0	2.6	8418.66	91.75	0.31	1.31	0.41
16.50-16.60	D	87.0		1.5	7569.00	87.00	0.20	1.28	0.25
19.00-19.10	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
21.50-21.60	D	87.0		1.0	7569.00	87.00	0.13	1.28	0.17
24.00-24.08	A	86.0	76.0	3.0	8321.89	91.22	0.36	1.31	0.47
26.30-26.43	D	87.0		2.1	7569.00	87.00	0.28	1.28	0.36
28.90-29.00	D	87.0		2.4	7569.00	87.00	0.32	1.28	0.41
32.15-32.25	D	87.0		1.3	7569.00	87.00	0.17	1.28	0.22
35.85-35.95	A	87.0	78.0	1.6	8640.20	92.95	0.19	1.32	0.24
36.80-36.90	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
41.50-41.60	D	87.0		0.9	7569.00	87.00	0.12	1.28	0.15
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
Test Type *						*W Entry required if test type is not Diametral			
A	Axial Test		D	Diametral Test					
B	Block Test		I	Irregular Lump Test					

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 10-Jan-23

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

DATE RECEIVED	21-Dec-22	DATE SAMPLED	18-Nov-22
DATE TESTED	06-Jan-23	SAMPLED BY	Client
MATERIAL	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
119832	BH01 6.80-7.00	MW	87	174	2.00	Saw / Grinding	74.6	12.5	Split vertically top to bottom with no visible end defects
119835	BH01 12.57-12.80	MW	87	174	2.00	Saw / Grinding	100.4	16.9	Split vertically top to bottom with no visible end defects
119838	BH01 17.50-17.80	MW	87	174	2.00	Saw / Grinding	47.5	8.0	Split vertically top to bottom with no visible end defects
119841	BH01 22.70-22.95	MW	87	174	2.00	Saw / Grinding	119.1	20.0	Split vertically top to bottom with no visible end defects
119844	BH01 27.20-27.40	MW	87	174	2.00	Saw / Grinding	132.5	22.3	Split vertically top to bottom with no visible end defects
119847	BH01 34.20-34.40	MW	87	174	2.00	Saw / Grinding	80.8	13.6	Split vertically top to bottom with no visible end defects
119850	BH01 39.55-39.75	MW	87	174	2.00	Saw / Grinding	109.1	18.4	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 10-Jan-23

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

SAMPLE LABEL	BH02	DATE SAMPLED	07-Nov-22
LAB SAMPLE No	120005-120020	DATE RECEIVED	21-Dec-22
DATE TESTED	04-Jan-23	SAMPLED BY	Client

MATERIAL	Sandstone
ADVISED SOURCE	Site Investigation Samples

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
15.00-15.10	A	86.0	75.0	2.4	8212.40	90.62	0.29	1.31	0.38
13.15-13.27	D	87.0		1.4	7569.00	87.00	0.18	1.28	0.24
6.80-6.88	A	86.0	79.0	2.6	8650.39	93.01	0.30	1.32	0.40
10.20-10.31	D	87.0		2.2	7569.00	87.00	0.29	1.28	0.37
16.90-17.00	D	86.0		1.6	7396.00	86.00	0.22	1.28	0.28
18.37-18.50	D	87.0		1.7	7569.00	87.00	0.22	1.28	0.29
17.30-17.40	A	87.0	78.0	3.6	8640.20	92.95	0.42	1.32	0.55
21.00-21.12	D	86.0		1.2	7396.00	86.00	0.16	1.28	0.21
13.20-13.32	D	87.0		1.2	7569.00	87.00	0.16	1.28	0.20
8.25-8.35	D	87.0		0.8	7569.00	87.00	0.11	1.28	0.14
5.66-5.76	D	87.0		0.4	7569.00	87.00	0.05	1.28	0.07
15.66-15.76	D	87.0		1.9	7569.00	87.00	0.25	1.28	0.32
24.10-24.20	D	87.0		1.8	7569.00	87.00	0.24	1.28	0.31
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
Test Type *						*W Entry required if test type is not Diametral			
A	Axial Test		D	Diametral Test					
B	Block Test		I	Irregular Lump Test					

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 10-Jan-23

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions
SITE	C5128
JOB NUMBER	MRN 4573/1

DATE RECEIVED	21-Dec-22	DATE SAMPLED	07-Nov-22
DATE TESTED	06-Jan-23	SAMPLED BY	Client
MATERIAL	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
120011	BH02 16.00-16.30	MW	87	174	2.00	Saw / Grinding	101.4	17.1	Split vertically top to bottom with no visible end defects
120012	BH02 12.00-12.33	MW	87	174	2.00	Saw / Grinding	84.5	14.2	Split vertically top to bottom with no visible end defects
120013	BH02 7.20-7.42	MW	87	174	2.00	Saw / Grinding	76.3	12.8	Split vertically top to bottom with no visible end defects
120021	BH02 18.20-18.42	MW	87	174	2.00	Saw / Grinding	99.2	16.7	Split vertically top to bottom with no visible end defects
120022	BH02 22.10-22.33	MW	87	174	2.00	Saw / Grinding	109.4	18.4	Split vertically top to bottom with no visible end defects
120023	BH02 11.90-12.22	MW	87	174	2.00	Saw / Grinding	102.5	17.2	Split vertically top to bottom with no visible end defects
120024	BH02 9.10-9.35	MW	87	174	2.00	Saw / Grinding	59.1	9.9	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 10-Jan-23

TEST REPORT

Client Brownfield Solutions Ltd

Address William Smith House
173-183 Witton Street
Northwich
Cheshire
CW9 5LP

Contract C5128

Job Number MRN 4573/22
Date of Issue 23 November 2023
Page 1 of 5

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
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ANDREW HOUSE, HADFIELD STREET,
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DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

Depth (m)	Test Type*	D (mm)	W** (mm)	Load (P) (kN)	D _e ² (mm ²)	D _e (mm)	I _s (MPa)	F	I _{s(50)} (MPa)
6.3-6.43	D	85.2		1.7	7259.04	85.20	0.23	1.27	0.30
10.5-10.63	D	85.2		1.4	7259.04	85.20	0.19	1.27	0.25
16.68-16.89	D	85.2		1.8	7259.04	85.20	0.25	1.27	0.32
17.82-18.1	D	85.2		1.0	7259.04	85.20	0.14	1.27	0.18
25.2-25.5	D	85.0		1.7	7225.00	85.00	0.24	1.27	0.30
27.5-27.88	D	85.0		1.9	7225.00	85.00	0.26	1.27	0.33
28.74-29.09	D	84.8		1.4	7191.04	84.80	0.19	1.27	0.25
30.93-31.31	D	84.8		1.6	7191.04	84.80	0.22	1.27	0.28
30-30.35	D	85.0		1.7	7225.00	85.00	0.24	1.27	0.30
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
					0.00	0.00	0.00	0.00	0.00
Test Type *						*W	Entry required if test type is not Diametral		
A	Axial Test		D	Diametral Test					
B	Block Test		I	Irregular Lump Test					

Page 2 of 5

MURRAY RIX

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TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions Ltd
SITE	C5128
JOB NUMBER	MRN 4573/22

DATE RECEIVED	06-Nov-23	DATE SAMPLED	31-Oct-23
DATE TESTED	20-Nov-23	SAMPLED BY	Client
MATERIAL TESTED	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
133606	BH06 18.1-18.39	MR	85	171	2.01	Saw / Grinding	57.3	10.1	Split vertically top to bottom with no visible end defects
133608	BH06 21.07-21.41	MR	85	170	2.00	Saw / Grinding	64.6	11.4	Split vertically top to bottom with no visible end defects
133609	BH06 24.38-24.64	MR	85	170	2.00	Saw / Grinding	78.9	13.9	Split vertically top to bottom with no visible end defects
133611	BH06 25.73-26.05	MR	85	170	2.00	Saw / Grinding	80.1	14.1	Split vertically top to bottom with no visible end defects
133614	BH06 29.65-29.95	MR	85	171	2.01	Saw / Grinding	105.8	18.6	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 23-Nov-23

ANDREW HOUSE, HADFIELD STREET,
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DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

[illegible]

Page 4 of 5

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
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TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 - 14 Method C

CLIENT	Brownfield Solutions Ltd
SITE	C5128
JOB NUMBER	MRN 4573/22

DATE RECEIVED	06-Nov-23	DATE SAMPLED	01, 02-Nov-23
DATE TESTED	20-Nov-23	SAMPLED BY	Client
MATERIAL TESTED	Sandstone		

Sample Number	Sample Reference	Tested By	Diameter (mm)	Length* (mm)	L/D Ratio	Method of Preparation	Load at Failure (kN)	Compressive Strength (N/mm ²)	Description after Test
133618	BH07 9.7-9.94	MR	85	170	2.00	Saw / Grinding	68.3	12.0	Split vertically top to bottom with no visible end defects
133622	BH07 15-15.28	MR	85	170	2.00	Saw / Grinding	72.2	12.7	Split vertically top to bottom with no visible end defects
133624	BH07 20.7-21	MR	85	170	2.00	Saw / Grinding	102.6	18.1	Split vertically top to bottom with no visible end defects
133627	BH07 24.6-24.88	MR	85	170	2.00	Saw / Grinding	83.6	14.7	Split vertically top to bottom with no visible end defects
133629	BH07 27.59-27.8	MR	85	171	2.01	Saw / Grinding	85.3	15.0	Split vertically top to bottom with no visible end defects

Comments / Deviation from standard method / Abnormalities noted during visual inspection.

*Length after sample preparation

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED



DATE 23-Nov-23

APPENDIX E

Monitoring Results

Ground Gas Monitoring Results



CLIENT:		Date	Operator	Analysr	Weather Observations				Temp (°C)		Pressure Trend	Min Barometric Pressure (mb)				Notes							
DOMIS		22/12/2022	CGM	GA5000	Light rain		Light breeze		Cool		8	Falling	980										
JOB NO.		06/01/2023	CGM	GA5000	Sunny		No wind		Cool		6	Falling	1003										
C5128		20/01/2023	CGM	GA5000	Sunny		No wind		Cool		6	Rising	1013										
SITE:		09/02/2023	CGM	GFM436	Sunny		Light breeze		Cool		8	Falling	1020										
ST MICHAELS MANCHESTER		22/02/2023	CGM	GFM436	Overcast		No wind		Cool		9	Falling	1006										
		08/03/2023	CGM	GFM436	Overcast		No wind		Cool		4	Falling	990										
		08/11/2023	CGM	GFM436	Overcast		No wind		Cool		7	Falling	996										
Notes: mb = milibars; CH ₄ = methane; LEL = lower explosive limit = 5%v/v; CO ₂ = carbon dioxide; O ₂ = oxygen; CO=carbon monoxide; H ₂ S = hydrogen sulphide; TVOC= Total volatile organic compounds; PPM = parts per million. Where the flow is less than the limit of detection of the instrument, the detection limit is reported (Highlighted in green). Gas Screening Values (GSVs) are rounded to 3 decimal places. Calibration Records for analysers used available on request.																							
Date	Time	Location	Response zone (m)	Pressures (mb)		Gas flows (l/hr)		CH ₄ (%v/v)		CH ₄ (%LEL)		CO ₂ (%v/v)		O ₂ (%v/v)		Other Gases (PPM)			Depth to Water (m)	Well Base (m)	Gas Screening Value (CH ₄) (l/hr)	Gas Screening Value (CO ₂) (l/hr)	Notes
				Atmospheric Pressure	Relative Well Pressure	Initial	Steady	Peak	Steady	Peak	Steady	Peak	Steady	Peak	Steady	CO	H ₂ S	TVOC (PID)					
				Summary Statistics																			
Max. values:				1013	0.0	0.1	0.1	0.1	0.1	2.0	2.0	1.9	0.6	20.9	21.2	0.0	0.0	0.4	17.6	21.0	0.000	0.002	
Min. values:				1013	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	16.4	19.4	0.0	0.0	0.1	10.8	13.3	0.000	0.000		
				Worst-case GSVs based on maximum recorded steady flow and maximum individual peak concentrations:																0.000	0.002		
22/12/2022	AM	Ambient	5.00-15.00					0.1		2.0		0.1		20.9		0.0							
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.3	0.1	20.4	20.6	N/A	0.0	N/A	11.00	14.70	0.000	0.000	
22/12/2022	AM	Ambient						0.1		2.0		0.1		20.9		0.0							
06/01/2023	AM	Ambient	5.00-15.00					0.1		2.0		0.1		20.3		0.0							
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.5	0.2	19.8	20.0	N/A	0.0	0.1	10.98	14.80	0.000	0.001	
BH04						0.1	0.1	0.1	0.1	2.0	2.0	1.5	0.6	18.0	19.4	N/A	0.0	0.4	11.59	13.63	0.000	0.002	
BH05						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
06/01/2023	AM	Ambient						0.1		2.0		0.1		20.3		0.0							HOLE OBSTRUCTED
20/01/2023	AM	Ambient	5.00-15.00	1013				0.1				0.1		20.2		0							
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.3	0.1	19.9	20.1	/	0.0	/	11.07	14.60	0.000	0.000	
BH04						0.1	0.1	0.1	0.1	2.0	2.0	1.6	0.2	17.8	19.9	/	0.0	/	11.60	13.32	0.000	0.002	
BH05						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
20/01/2023	AM	Ambient																				HOLE OBSTRUCTED	
09/02/2023	PM	Ambient	5.00-15.00					0.0				0.0		20.4									
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.4	0.1	19.9	20.0	0.0	0.0	/	10.86	14.60	0.000	0.000	
BH04						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
BH05						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
09/02/2023	PM	Ambient						0.0				0.0		20.4									UNABLE TO ACCESS, CRANE IN USE. UNABLE TO ACCESS, CRANE IN USE.
22/02/2023	PM	Ambient	5.00-15.00					0.0				0.0		20.5									
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.7	0.1	19.6	20.4	0.0	0.0	/	10.81	14.65	0.000	0.001	
BH04						0.1	0.1	0.1	0.1	2.0	2.0	1.9	0.3	17.1	19.9	0.0	0.0	/	11.30	13.26	0.000	0.002	
BH05						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
22/02/2023	PM	Ambient						0.0				0.0		20.5									HOLE OBSTRUCTED
08/03/2023	AM	Ambient	5.00-15.00					0.0				0.2		20.0									
BH01						0.1	0.1	0.1	0.1	2.0	2.0	0.1	0.1	20.0	20.4	0.0	0.0	/	10.75	14.63	0.000	0.000	
BH04						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
BH05						/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
08/03/2023	AM	Ambient						0.0				0.2		20.0									HOLE OBSTRUCTED HOLE OBSTRUCTED
08/11/2023	AM	Ambient	8.00-20.00					0.0		0.0		0.2		20.0									
BH07						0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	16.4	21.2	0.0	0.0	/	17.55	20.95	0.000	0.000	
08/11/2023	AM	Ambient						0.0				0.2		20.0									

TEST DATE AND CONDITIONS	
Date	23/01/23
Atmospheric pressure	1023 mb
Ambient Temp	20.1 °C
EnviroNics Serial No.	2518

GAS DATA LTD	
Unit 4 Fairfield court	
Seven Stars Estate	
Coventry	
CV3 4LJ, UK	
+44 (0) 24 7630 3311	

GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS					
SO Number	Instrument Banner	Instrument Serial Number + SW Version	Job Number(s)		
333016	Gfm 436	13233 V27.10	24706	—	—

Calibration Technician P. [Signature]

DATE 19/1/23

Inspection Technician [Signature]

DATE 23/01/23

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable(NA)	INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P	Instrument		✓
	Keyboard Test (All keys)	P	Leather Case		✓
	Backlight Test	P	Instrument Strap		✓
	Clock Set / Running	P	AC Battery Charger (UK)		✓
	Comms Test	P	AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P	AC Battery Charger (US)		X
	Overall Leak Test (30mb)	N/A	AC Battery Charger (AUS)		X
	Battery Charge Test	P	Gas Sample Pipe		X
	Service Date set to?	19/01/24	Hard Carry Case		✓
Channel Tests	Data Logging Enabled?	P	Spares Pot		X
	Verify CH4/LEL/Hexane/PID	P	Allen Key		X
	Verify CO2	P	Flow Sample Pipe		X
	Verify O2	P	Temperature Probe		X
	Verify H2S	P	Vane Anemometer		X
	Verify CO	P	USB Cable		✓
	Verify LEL	P	USB Memory Stick		✓
	Verify 1st Option gas	N/A	SM V5 Software	Ver 6.05	✓
	Verify atmospheric pressure	P	Internal Filter Pack	Qty	X
	Verify differential pressure	P	External Filter Pack	Qty	X
	Verify flow	P	Field Guide		X
	Verify temperature probe input	P	EX Safety Flier		X
	Verify vane anemometer input	P	Extra Items: SERVICE SPARES CUSTOMER: FILTER & PART SAMPLE PIPE		
	Jobcard(s) completed and signed	P			
DataBase Checks	Jobcard(s) booked off database	P			
	Calibration certificate completed	P			
	Complete & print QI record	N/A			
Label Checks	No. of Calibration label fitted	12216	Comments		
	MCERTS label not displayed	P			
	Warranty label fitted	P			
H2S Range	H2S Range from SO	5000 ppm			
	H2S Range from cal cert	5000 ppm			
	Over-range value correct?	P			

TEST DATE AND CONDITIONS	
Date	18/1/23
Atmospheric pressure	985mb
Ambient Temp	22.2°C
Enviroics Serial No.	2633

GAS DATA LTD
Unit 4 Fairfield court
Seven Stars Estate
Coventry
CV3 4LJ, UK
+44 (0) 24 7630 3311



GFM436-1 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

INSTRUMENT DETAILS	
Serial No	Customer
13233	Brownfield Solutions Ltd

INSTRUMENT CHECKS			
Keyboard	✓	Pump Flow	500cc/min
Display Contrast	✓	Pump Flow @ -200mB	350cc/min
Clock Set / Running	✓	S/W Version	G436-00.0027/0010
Labels Fitted	✓	Recalibration Date	19/1/24

GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	CH4 (%)	tol. (% vol.)	CO2 (%)	tol. (% vol.)	O2 (%)	tol. (% vol.)
N2	100%	0.0	0.0	0.0	0.0	0.0	+/-0.1
CH4	5%	5.0	+/-0.3	0.0	0.0	0.0	+/-0.1
	60%	60.3	+/-3.0	0.0	0.0	0.0	+/-0.1
CO2	5%	0.0	0.0	4.9	+/-0.3	0.0	+/-0.1
	40%	0.0	0.0	39.9	+/-3.0	0.0	+/-0.1
O2	20.9%	0.0	0.0	0.0	+0.1	20.9	+/-0.5

OPTIONAL GAS CHECKS							
Calibration Gas		Instrument Gas Channels Read					
Gas Type	Applied Conc.	Label	H2S	CO		Hexane	tol. (% vol.)
		Range	5000ppm	2000ppm		2.00%	
N2	100%		0	0		0.000	0.0
H2S	1500ppm		1510	0			+/- 5.0
CO	1000ppm		60	1000			+/- 5.0
Hexane	2.00%					1.935	+/- 10.0

PRESSURE CHECKS							
Calibration Pressure		Instrument Pressure Channels Read					
Pressure @	Applied Pressure	Atmospheric [Ap] (mB)	tol. (mB)				
All Ports	Current Atmospheric	986	+/-2.0				
Ap Port (Internal)	+800mB(a)	799	+/-5.0				
	+1200mB(a)	1198	+/-5.0				

TEST DATE AND CONDITIONS	
Date	18/1/23
Atmospheric pressure	985mb
Ambient Temp	22.2°C
EnviroNics Serial No.	2633

GAS DATA LTD	 GAS DATA LISTEN • ANALYSE • INFORM
Unit 4 Fairfield court	
Seven Stars Estate	
Coventry	
CV3 4LJ, UK	
+44 (0) 24 7630 3311	

GFM436-1 FINAL INSPECTION & CALIBRATION CHECK CERTIFICATE

FLOW CHECKS					
Calibration Flow		Instrument Flow Channels Read			
Applied Flow (l/hour)	Applied Pressure (Pa)	Flow [Flow] (l/hour)	tol. (l/hour)	Differential Pressure [Dp] (Pa)	tol. (Pa)
-30.0	-405	30.0	+/-3.0	-406	+/-50
-3.0	-17	-3.0	+/-1.0	-18	+/-6
0.0	0	0.0	0.0	0	0.0
+3.0	15	3.1	+/-0.5	16	+/-3
+30.0	321	30.1	+/-3.0	320	+/-50
+60.0	961	60.0	+/-6.0	960	+/-130
+90.0	1906	90.7	+/-9.0	1949	+/-250

TEMPERATURE CHECK		
Calibration Temperature	Instrument Temperature Channel Read	
Applied Equivalent Temperature (°C)	Temperature [Temp] (°C)	tol. (°C)
-10.0	-10.0	+/- 2.0
0.0	0.0	+/- 1.0
30.0	29.5	+/- 1.0
60.0	59.5	+/- 1.0
100.0	99.0	+/- 1.0

Notes:

The instrument identified by the serial number stated above has been tested by Gas Data personnel for calibration accuracy on the date and under the ambient conditions stated. Gas Data Ltd internal BS EN ISO9001:2015, BS EN ISO 14001:2015 and BS EN ISO 45001:2018 compliant workshop procedures were followed to apply known calibration test gases, gas flow rates, pressures and temperatures of the values stated. The results displayed on the instrument at each stage are recorded above.

Gas Data Ltd is certified to: BS EN ISO 9001:2015
BS EN ISO 14001:2015
BS EN ISO 45001:2018

TEST DATE AND CONDITIONS			
Date	24.7.23		
Atmospheric Pressure	989	mB	
Ambient Temperature	22.7	°C	
EnviroNics Serial No.	5089		

GAS DATA LTD Unit 4 Fairfield Court Seven Stars Estate Coventry CV3 4LJ UK +44 (0)24 7630 3311	 GAS DATA LISTEN · ANALYSE · INFORM
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GFM436-1 OUTWARD INSPECTION & QUALITY CHECK SHEET

INSTRUMENT DETAILS			
SO Number	Instrument Type	Instrument Serial Number + SW Version	Job Number(s)
335371	GFM436	13361 G436-27/10	124413

Calibration Technician *[Signature]* **Date** 24.7.23
Inspection Technician *[Signature]* **Date** 25.7.23

INSTRUMENT CHECKS		Pass (P), Fail (F) or not applicable (NA)		INSTRUMENT PACKING LIST		Tick if included
Function Tests	Dust Caps Fitted	P		Instrument		✓
	Keyboard Test (All Keys)	P		Leather Case		✓
	Backlight	P		Instrument Strap		✓
	Clock Set / Running	P		AC Battery Charger (UK)		✓
	Comms Test	P		AC Battery Charger (EURO)		X
	Pump Flow Test (In & Out)	P		AC Battery Charger (US)		X
	Overall Leak Test (30mB)	n/a		AC Battery Charger (AUS)		X
	Battery Charge Test	P		Gas Sample Pipe - (new issue)		✓
	Service Date set to?	24.7.23		Flow Sample Pipe - (new issue)		✓
Channel Tests	Data Logging Enabled?	P		Hard Carry Case		✓
	Verify CH4/LEL/Hexane/PID	P		Spares Pot		X
	Verify CO2	P		Allen Key		X
	Verify O2	P		Temperature Probe		X
	Verify H2S	P		Vane Anemometer		X
	Verify CO	P		USB Cable		✓
	Verify LEL	P		USB Memory stick		✓
	Verify 1 st Option Gas	N/A		SM V5 Software	Ver 6.05	✓
	Verify Atmospheric pressure	P		Internal Filter Pack	Qty	X
	Verify differential pressure	P		External Filter Pack	Qty	X
	Verify flow	P		Field Guide		X
	Verify temperature probe input	P		Extra Items: Sample Tube		
	Verify vane anemometer input	P				
DataBase Checks	Jobcard(s) completed and signed	P		Comments:		
	Jobcard(s) booked off database	P				
	Calibration certificate completed	P				
	Complete & print QI record	n/a				
Label Checks	No. of Calibration label fitted	GDC	13007			
	MCERTS label displayed	n/a				
	Warranty label fitted	P				
H2S Range	H2S Range from Sales Order	5000	ppm			
	H2S Range from Cal Cert	5000	ppm			
	Over-range value correct?	P				

APPENDIX F

Waste Assessment Report

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)



AWP6R-A9TLX-C8MH4

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

Job name

St Michaels, Manchester

Description/Comments

Project

C5128

Site

Classified by

Name: **Jake Wheaton**
 Date: **06 Jan 2023 15:44 GMT**
 Telephone: **01606334844**
 Company: **Brownfield Solutions Limited**
Brownfield Solutions Ltd
173-183 Witton Street
Northwich
CW9 5LP

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:

CERTIFIED

Course

Hazardous Waste Classification

Date

07 Oct 2021

Next 3 year Refresher due by Oct 2024

Purpose of classification

2 - Material Characterisation

Address of the waste

Land between Bootle Street and Jackson's Row, Manchester

Post Code M2 5NH

SIC for the process giving rise to the waste

41100 Development of building projects

Description of industry/producer giving rise to the waste

Redevelopment of a derelict Synagogue and associated car park.

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

Waste created during a site investigation and during excavation of soils for development of a 41 storey mixed use building including basement complex.

Description of the waste

Mix of made ground and natural strata comprising predominantly gravelly sand with varying cobble content.



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	WS01	0.50-0.70	Hazardous	HP 7, HP 10, HP 14	3
2	WS02	0.30-0.50	Non Hazardous		6
3	BH01	0.30-0.50	Hazardous	HP 7, HP 10, HP 14	8
4	BH01[2]	2.00-2.20	Hazardous	HP 7, HP 10, HP 14	11
5	BH02	1.30-1.50	Hazardous	HP 14	14
6	BH03	1.50-1.70	Non Hazardous		16
7	BH04	1.20-1.40	Non Hazardous		18
8	BH05	0.30-0.50	Non Hazardous		20
9	WS03	1.50-1.70	Non Hazardous		22
10	BH05[2]	1.20-1.40	Non Hazardous		24

Related documents

#	Name	Description
1	BSL Suite	waste stream template used to create this Job

Report

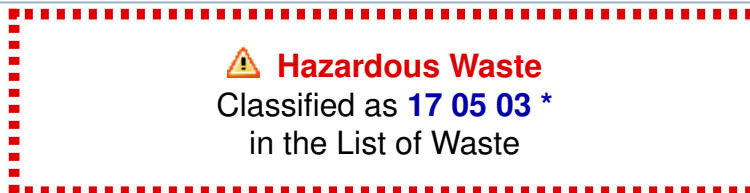
Created by: Jake Wheaton

Created date: 06 Jan 2023 15:44 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	26
Appendix B: Rationale for selection of metal species	27
Appendix C: Version	27



Classification of sample: WS01



Sample details

Sample name:	LoW Code:	
WS01	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.50-0.70 m		
Moisture content:		
20%		
(wet weight correction)		

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.416%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.416%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.416%)

Determinands

Moisture content: 20% 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	pH		PH		8.5 pH		8.5 pH	8.5 pH		
2	arsenic { arsenic trioxide }				24 mg/kg	1.32	25.35 mg/kg	0.00254 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	1.4 mg/kg	1.285	1.439 mg/kg	0.000112 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				22 mg/kg	1.462	25.723 mg/kg	0.00257 %	✓	
		215-160-9	1308-38-9							



#	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								
6	copper { dicopper oxide; copper (I) oxide }			1	100 mg/kg	1.126	90.071 mg/kg	0.00901 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }				5200 mg/kg		4160 mg/kg	0.416 %		✓	
	082-001-00-6										
8	mercury { mercury dichloride }				0.4 mg/kg	1.353	0.433 mg/kg	0.0000433 %		✓	
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dihydroxide }				18 mg/kg	1.579	22.745 mg/kg	0.00227 %		✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
11	zinc { zinc chloride }				310 mg/kg	2.085	516.961 mg/kg	0.0517 %		✓	
	030-003-00-2	231-592-0	7646-85-7								
12	naphthalene				0.18 mg/kg		0.144 mg/kg	0.0000144 %		✓	
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
		205-917-1	208-96-8								
14	acenaphthene				0.08 mg/kg		0.064 mg/kg	0.0000064 %		✓	
		201-469-6	83-32-9								
15	fluorene				0.14 mg/kg		0.112 mg/kg	0.0000112 %		✓	
		201-695-5	86-73-7								
16	phenanthrene				1.4 mg/kg		1.12 mg/kg	0.000112 %		✓	
		201-581-5	85-01-8								
17	anthracene				0.31 mg/kg		0.248 mg/kg	0.0000248 %		✓	
		204-371-1	120-12-7								
18	fluoranthene				2 mg/kg		1.6 mg/kg	0.00016 %		✓	
		205-912-4	206-44-0								
19	pyrene				2 mg/kg		1.6 mg/kg	0.00016 %		✓	
		204-927-3	129-00-0								
20	benzo[a]anthracene				1.2 mg/kg		0.96 mg/kg	0.000096 %		✓	
	601-033-00-9	200-280-6	56-55-3								
21	chrysene				0.98 mg/kg		0.784 mg/kg	0.0000784 %		✓	
	601-048-00-0	205-923-4	218-01-9								
22	benzo[b]fluoranthene				0.84 mg/kg		0.672 mg/kg	0.0000672 %		✓	
	601-034-00-4	205-911-9	205-99-2								
23	benzo[k]fluoranthene				0.56 mg/kg		0.448 mg/kg	0.0000448 %		✓	
	601-036-00-5	205-916-6	207-08-9								
24	benzo[a]pyrene; benzo[def]chrysene				0.89 mg/kg		0.712 mg/kg	0.0000712 %		✓	
	601-032-00-3	200-028-5	50-32-8								
25	indeno[123-cd]pyrene				0.35 mg/kg		0.28 mg/kg	0.000028 %		✓	
		205-893-2	193-39-5								
26	dibenz[a,h]anthracene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
27	benzo[ghi]perylene				0.53 mg/kg		0.424 mg/kg	0.0000424 %		✓	
		205-883-8	191-24-2								
28	TPH (C6 to C40) petroleum group				12 mg/kg		9.6 mg/kg	0.00096 %		✓	
			TPH								
29	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
30	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
31	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
Total:									0.486 %		



Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	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
ND	Not detected
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 Concentration too low to be considered flammable. Low concentrations of short chain hydrocarbons. Discounted as this is a solid waste without a free draining liquid phase.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00096%)

Classification of sample: WS02


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

Sample details

Sample name:	LoW Code:	
WS02	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)
0.30-0.50 m		
Moisture content:		
14%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% 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	pH		PH		7.6 pH		7.6 pH	7.6 pH		
2	arsenic { arsenic trioxide }				29 mg/kg	1.32	32.929 mg/kg	0.00329 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				19 mg/kg	1.462	23.882 mg/kg	0.00239 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				200 mg/kg	1.126	193.653 mg/kg	0.0194 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	980 mg/kg		842.8 mg/kg	0.0843 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				2.4 mg/kg	1.353	2.794 mg/kg	0.000279 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				42 mg/kg	1.579	57.052 mg/kg	0.00571 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc chloride }				610 mg/kg	2.085	1093.54 mg/kg	0.109 %	✓	
	030-003-00-2	231-592-0	7646-85-7							
12	naphthalene				0.14 mg/kg		0.12 mg/kg	0.000012 %	✓	
	601-052-00-2	202-049-5	91-20-3							
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
14	acenaphthene				0.13 mg/kg		0.112 mg/kg	0.0000112 %	✓	
		201-469-6	83-32-9							



#	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							
15	fluorene	201-695-5	86-73-7		0.14 mg/kg		0.12 mg/kg	0.000012 %	✓	
16	phenanthrene	201-581-5	85-01-8		1.4 mg/kg		1.204 mg/kg	0.00012 %	✓	
17	anthracene	204-371-1	120-12-7		0.23 mg/kg		0.198 mg/kg	0.0000198 %	✓	
18	fluoranthene	205-912-4	206-44-0		1.3 mg/kg		1.118 mg/kg	0.000112 %	✓	
19	pyrene	204-927-3	129-00-0		1.2 mg/kg		1.032 mg/kg	0.000103 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.54 mg/kg		0.464 mg/kg	0.0000464 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.58 mg/kg		0.499 mg/kg	0.0000499 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.39 mg/kg		0.335 mg/kg	0.0000335 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.35 mg/kg		0.301 mg/kg	0.0000301 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.4 mg/kg		0.344 mg/kg	0.0000344 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.172 mg/kg	0.0000172 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		0.29 mg/kg		0.249 mg/kg	0.0000249 %	✓	
Total:								0.226 %		

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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH01

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:
BH01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30-0.50 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
17%	
(wet weight correction)	

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 1.577%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 1.577%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 1.577%)

zinc chloride: (compound conc.: 0.277%)

Determinands

Moisture content: 17% 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	pH		PH		8.2	pH		8.2	pH	8.2 pH		
2	arsenic { arsenic trioxide }				69	mg/kg	1.32	75.615	mg/kg	0.00756 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
3	cadmium { cadmium sulfide }			1	<0.2	mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6									
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2	mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									



#	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								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		25 mg/kg	1.462	30.327	mg/kg	0.00303 %	✓	
6	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7		770 mg/kg	1.126	719.555	mg/kg	0.072 %	✓	
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6		1	19000 mg/kg		15770	mg/kg	1.577 %	✓	
8	mercury { mercury dichloride }	080-010-00-X	231-299-8		1.1 mg/kg	1.353	1.236	mg/kg	0.000124 %	✓	
9	nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]		22 mg/kg	1.579	28.842	mg/kg	0.00288 %	✓	
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8			<1 mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
11	zinc { zinc chloride }	030-003-00-2	231-592-0		1600 mg/kg	2.085	2768.244	mg/kg	0.277 %	✓	
12	naphthalene	601-052-00-2	202-049-5		0.21 mg/kg		0.174	mg/kg	0.0000174 %	✓	
13	acenaphthylene	205-917-1	208-96-8		<0.05 mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
14	acenaphthene	201-469-6	83-32-9		<0.05 mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
15	fluorene	201-695-5	86-73-7		0.05 mg/kg		0.0415	mg/kg	0.00000415 %	✓	
16	phenanthrene	201-581-5	85-01-8		0.5 mg/kg		0.415	mg/kg	0.0000415 %	✓	
17	anthracene	204-371-1	120-12-7		0.11 mg/kg		0.0913	mg/kg	0.00000913 %	✓	
18	fluoranthene	205-912-4	206-44-0		0.7 mg/kg		0.581	mg/kg	0.0000581 %	✓	
19	pyrene	204-927-3	129-00-0		0.7 mg/kg		0.581	mg/kg	0.0000581 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.41 mg/kg		0.34	mg/kg	0.000034 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.36 mg/kg		0.299	mg/kg	0.0000299 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.32 mg/kg		0.266	mg/kg	0.0000266 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.26 mg/kg		0.216	mg/kg	0.0000216 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.27 mg/kg		0.224	mg/kg	0.0000224 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.14 mg/kg		0.116	mg/kg	0.0000116 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.05 mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		0.19 mg/kg		0.158	mg/kg	0.0000158 %	✓	
28	TPH (C6 to C40) petroleum group		TPH		229 mg/kg		190.07	mg/kg	0.019 %	✓	
29	benzene	601-020-00-8	200-753-7		<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
30	toluene	601-021-00-3	203-625-9		<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
31	ethylbenzene	601-023-00-4	202-849-4		<0.001 mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
Total:									1.959 %		



Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	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
ND	Not detected
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 Concentration too low to be considered flammable. Low concentrations of short chain hydrocarbons. Discounted as this is a solid waste without a free draining liquid phase.

Hazard Statements hit:

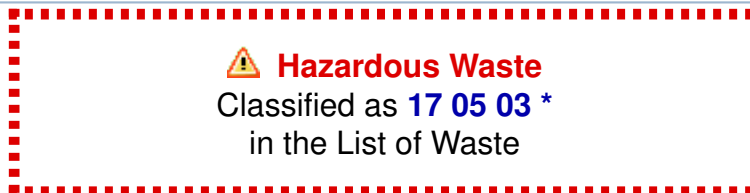
Fam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.019%)



Classification of sample: BH01[2]



Sample details

Sample name:	LoW Code:	
BH01[2]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
2.00-2.20 m		
Moisture content:		
15%		
(wet weight correction)		

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1A; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.706%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.706%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

dicopper oxide; copper (I) oxide: (compound conc.: 0.402%)

lead compounds with the exception of those specified elsewhere in this Annex (worst case): (Note 1 conc.: 0.706%)

zinc chloride: (compound conc.: 0.283%)

Determinands

Moisture content: 15% 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	pH				7.7 pH		7.7	pH	7.7 pH		
2	arsenic { arsenic trioxide }				48 mg/kg	1.32	53.869	mg/kg	0.00539 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257	mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308	mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								



#		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								
5		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }			1	25 mg/kg	1.462	31.058 mg/kg	0.00311 %	✓		
		215-160-9	1308-38-9									
6		copper { dicopper oxide; copper (I) oxide }				4200 mg/kg	1.126	4019.421 mg/kg	0.402 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	8300 mg/kg		7055 mg/kg	0.706 %	✓		
		082-001-00-6										
8		mercury { mercury dichloride }				0.7 mg/kg	1.353	0.805 mg/kg	0.0000805 %	✓		
		080-010-00-X	231-299-8	7487-94-7								
9		nickel { nickel dihydroxide }				36 mg/kg	1.579	48.333 mg/kg	0.00483 %	✓		
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
10		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD	
		034-002-00-8										
11		zinc { zinc chloride }				1600 mg/kg	2.085	2834.949 mg/kg	0.283 %	✓		
		030-003-00-2	231-592-0	7646-85-7								
12		naphthalene				0.27 mg/kg		0.23 mg/kg	0.000023 %	✓		
		601-052-00-2	202-049-5	91-20-3								
13		acenaphthylene				0.07 mg/kg		0.0595 mg/kg	0.00000595 %	✓		
			205-917-1	208-96-8								
14		acenaphthene				0.19 mg/kg		0.161 mg/kg	0.0000161 %	✓		
			201-469-6	83-32-9								
15		fluorene				0.31 mg/kg		0.264 mg/kg	0.0000264 %	✓		
			201-695-5	86-73-7								
16		phenanthrene				4 mg/kg		3.4 mg/kg	0.00034 %	✓		
			201-581-5	85-01-8								
17		anthracene				1 mg/kg		0.85 mg/kg	0.000085 %	✓		
			204-371-1	120-12-7								
18		fluoranthene				5.4 mg/kg		4.59 mg/kg	0.000459 %	✓		
			205-912-4	206-44-0								
19		pyrene				5.3 mg/kg		4.505 mg/kg	0.000451 %	✓		
			204-927-3	129-00-0								
20		benzo[a]anthracene				2.8 mg/kg		2.38 mg/kg	0.000238 %	✓		
		601-033-00-9	200-280-6	56-55-3								
21		chrysene				2.4 mg/kg		2.04 mg/kg	0.000204 %	✓		
		601-048-00-0	205-923-4	218-01-9								
22		benzo[b]fluoranthene				2.1 mg/kg		1.785 mg/kg	0.000179 %	✓		
		601-034-00-4	205-911-9	205-99-2								
23		benzo[k]fluoranthene				1.8 mg/kg		1.53 mg/kg	0.000153 %	✓		
		601-036-00-5	205-916-6	207-08-9								
24		benzo[a]pyrene; benzo[def]chrysene				2.1 mg/kg		1.785 mg/kg	0.000179 %	✓		
		601-032-00-3	200-028-5	50-32-8								
25		indeno[123-cd]pyrene				0.82 mg/kg		0.697 mg/kg	0.0000697 %	✓		
			205-893-2	193-39-5								
26		dibenz[a,h]anthracene				0.19 mg/kg		0.161 mg/kg	0.0000161 %	✓		
		601-041-00-2	200-181-8	53-70-3								
27		benzo[ghi]perylene				1 mg/kg		0.85 mg/kg	0.000085 %	✓		
			205-883-8	191-24-2								
Total:									1.407 %			



Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH02

Hazardous Waste
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:
BH02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
1.30-1.50 m	
Moisture content:	
17%	
(wet weight correction)	

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

dicopper oxide; copper (I) oxide: (compound conc.: 0.206%)

zinc chloride: (compound conc.: 0.225%)

Determinands

Moisture content: 17% 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	pH		PH		7.9 pH		7.9 pH	7.9 pH		
2	arsenic { arsenic trioxide }				41 mg/kg	1.32	44.931 mg/kg	0.00449 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	3.8 mg/kg	1.285	4.054 mg/kg	0.000315 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				22 mg/kg	1.462	26.688 mg/kg	0.00267 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				2200 mg/kg	1.126	2055.872 mg/kg	0.206 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	760 mg/kg		630.8 mg/kg	0.0631 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				1.4 mg/kg	1.353	1.573 mg/kg	0.000157 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				74 mg/kg	1.579	97.013 mg/kg	0.0097 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									



#		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							
11	 zinc { zinc chloride }	030-003-00-2	231-592-0	7646-85-7		1300 mg/kg	2.085	2249.198 mg/kg	0.225 %	✓	
12	 naphthalene	601-052-00-2	202-049-5	91-20-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
13	 acenaphthylene		205-917-1	208-96-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
14	 acenaphthene		201-469-6	83-32-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
15	 fluorene		201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16	 phenanthrene		201-581-5	85-01-8		0.83 mg/kg		0.689 mg/kg	0.0000689 %	✓	
17	 anthracene		204-371-1	120-12-7		0.17 mg/kg		0.141 mg/kg	0.0000141 %	✓	
18	 fluoranthene		205-912-4	206-44-0		1.4 mg/kg		1.162 mg/kg	0.000116 %	✓	
19	 pyrene		204-927-3	129-00-0		1.4 mg/kg		1.162 mg/kg	0.000116 %	✓	
20	 benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.79 mg/kg		0.656 mg/kg	0.0000656 %	✓	
21	 chrysene	601-048-00-0	205-923-4	218-01-9		0.62 mg/kg		0.515 mg/kg	0.0000515 %	✓	
22	 benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.67 mg/kg		0.556 mg/kg	0.0000556 %	✓	
23	 benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.47 mg/kg		0.39 mg/kg	0.000039 %	✓	
24	 benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.77 mg/kg		0.639 mg/kg	0.0000639 %	✓	
25	 indeno[123-cd]pyrene		205-893-2	193-39-5		0.4 mg/kg		0.332 mg/kg	0.0000332 %	✓	
26	 dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	 benzo[ghi]perylene		205-883-8	191-24-2		0.5 mg/kg		0.415 mg/kg	0.0000415 %	✓	
Total:									0.512 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
•	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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH03



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

Sample details

Sample name:	LoW Code:
BH03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.50-1.70 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
13%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 13% 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	pH		PH		8.6 pH		8.6 pH	8.6 pH		
2	arsenic { arsenic trioxide }				12 mg/kg	1.32	13.784 mg/kg	0.00138 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	0.7 mg/kg	1.285	0.783 mg/kg	0.0000609 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	19.073 mg/kg	0.00191 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				29 mg/kg	1.126	28.406 mg/kg	0.00284 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	120 mg/kg		104.4 mg/kg	0.0104 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				11 mg/kg	1.579	15.116 mg/kg	0.00151 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc chloride }				180 mg/kg	2.085	326.436 mg/kg	0.0326 %	✓	
	030-003-00-2	231-592-0	7646-85-7							
12	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
14	acenaphthene				0.28 mg/kg		0.244 mg/kg	0.0000244 %	✓	
		201-469-6	83-32-9							



#	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							
15	fluorene	201-695-5	86-73-7		0.23 mg/kg		0.2 mg/kg	0.00002 %	✓	
16	phenanthrene	201-581-5	85-01-8		3.7 mg/kg		3.219 mg/kg	0.000322 %	✓	
17	anthracene	204-371-1	120-12-7		0.79 mg/kg		0.687 mg/kg	0.0000687 %	✓	
18	fluoranthene	205-912-4	206-44-0		5.2 mg/kg		4.524 mg/kg	0.000452 %	✓	
19	pyrene	204-927-3	129-00-0		4.5 mg/kg		3.915 mg/kg	0.000392 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		2.1 mg/kg		1.827 mg/kg	0.000183 %	✓	
21	chrysene	601-048-00-0	205-923-4		2 mg/kg		1.74 mg/kg	0.000174 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.9 mg/kg		1.653 mg/kg	0.000165 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		1.1 mg/kg		0.957 mg/kg	0.0000957 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		2.1 mg/kg		1.827 mg/kg	0.000183 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		1 mg/kg		0.87 mg/kg	0.000087 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.2 mg/kg		0.174 mg/kg	0.0000174 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		1.2 mg/kg		1.044 mg/kg	0.000104 %	✓	
Total:								0.0535 %		

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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH04

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

Sample details

Sample name:	LoW Code:
BH04	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.20-1.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
19%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 19% 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	pH		PH		7.8 pH	7.8 pH		
2	arsenic { arsenic trioxide }				16 mg/kg	1.32	17.111 mg/kg	0.00171 %
	033-003-00-0	215-481-4	1327-53-3					✓
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %
	048-010-00-4	215-147-8	1306-23-6					<LOD
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %
	024-001-00-0	215-607-8	1333-82-0					<LOD
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				10 mg/kg	1.462	11.839 mg/kg	0.00118 %
		215-160-9	1308-38-9					✓
6	copper { dicopper oxide; copper (I) oxide }				33 mg/kg	1.126	30.095 mg/kg	0.00301 %
	029-002-00-X	215-270-7	1317-39-1					✓
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	95 mg/kg		76.95 mg/kg	0.0077 %
	082-001-00-6							✓
8	mercury { mercury dichloride }				0.8 mg/kg	1.353	0.877 mg/kg	0.0000877 %
	080-010-00-X	231-299-8	7487-94-7					✓
9	nickel { nickel dihydroxide }				9.5 mg/kg	1.579	12.154 mg/kg	0.00122 %
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]					✓
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %
	034-002-00-8							<LOD
11	zinc { zinc chloride }				38 mg/kg	2.085	64.162 mg/kg	0.00642 %
	030-003-00-2	231-592-0	7646-85-7					✓
12	naphthalene				0.61 mg/kg		0.494 mg/kg	0.0000494 %
	601-052-00-2	202-049-5	91-20-3					✓
13	acenaphthylene				2.6 mg/kg		2.106 mg/kg	0.000211 %
		205-917-1	208-96-8					✓
14	acenaphthene				0.53 mg/kg		0.429 mg/kg	0.0000429 %
		201-469-6	83-32-9					✓



#	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							
15	fluorene	201-695-5	86-73-7		0.75 mg/kg		0.608 mg/kg	0.0000608 %	✓	
16	phenanthrene	201-581-5	85-01-8		3.6 mg/kg		2.916 mg/kg	0.000292 %	✓	
17	anthracene	204-371-1	120-12-7		2.6 mg/kg		2.106 mg/kg	0.000211 %	✓	
18	fluoranthene	205-912-4	206-44-0		28 mg/kg		22.68 mg/kg	0.00227 %	✓	
19	pyrene	204-927-3	129-00-0		40 mg/kg		32.4 mg/kg	0.00324 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		7.3 mg/kg		5.913 mg/kg	0.000591 %	✓	
21	chrysene	601-048-00-0	205-923-4		8.1 mg/kg		6.561 mg/kg	0.000656 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		8.5 mg/kg		6.885 mg/kg	0.000689 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		3.4 mg/kg		2.754 mg/kg	0.000275 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		5 mg/kg		4.05 mg/kg	0.000405 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		2.1 mg/kg		1.701 mg/kg	0.00017 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.56 mg/kg		0.454 mg/kg	0.0000454 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		2.1 mg/kg		1.701 mg/kg	0.00017 %	✓	
Total:								0.0311 %		

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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH05

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

Sample details

Sample name:	LoW Code:	
BH05	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)
0.30-0.50 m		
Moisture content:		
16%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 16% 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	 pH			PH		8.5 pH		8.5 pH	8.5 pH		
2	 arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		22 mg/kg	1.32	24.4 mg/kg	0.00244 %	✓	
3	 cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	1.4 mg/kg	1.285	1.511 mg/kg	0.000118 %	✓	
4	 chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
5	 chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }		215-160-9	1308-38-9		34 mg/kg	1.462	41.742 mg/kg	0.00417 %	✓	
6	 copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		120 mg/kg	1.126	113.49 mg/kg	0.0113 %	✓	
7	 lead {  lead compounds with the exception of those specified elsewhere in this Annex (worst case) }	082-001-00-6			1	350 mg/kg		294 mg/kg	0.0294 %	✓	
8	 mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		1 mg/kg	1.353	1.137 mg/kg	0.000114 %	✓	
9	 nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		31 mg/kg	1.579	41.13 mg/kg	0.00411 %	✓	
10	 selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
11	 zinc { zinc chloride }	030-003-00-2	231-592-0	7646-85-7		210 mg/kg	2.085	367.71 mg/kg	0.0368 %	✓	
12	naphthalene	601-052-00-2	202-049-5	91-20-3		0.27 mg/kg		0.227 mg/kg	0.0000227 %	✓	
13	 acenaphthylene		205-917-1	208-96-8		0.12 mg/kg		0.101 mg/kg	0.0000101 %	✓	
14	 acenaphthene		201-469-6	83-32-9		0.88 mg/kg		0.739 mg/kg	0.0000739 %	✓	



#	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							
15	fluorene	201-695-5	86-73-7		0.55 mg/kg		0.462 mg/kg	0.0000462 %	✓	
16	phenanthrene	201-581-5	85-01-8		6.4 mg/kg		5.376 mg/kg	0.000538 %	✓	
17	anthracene	204-371-1	120-12-7		1.4 mg/kg		1.176 mg/kg	0.000118 %	✓	
18	fluoranthene	205-912-4	206-44-0		8.1 mg/kg		6.804 mg/kg	0.00068 %	✓	
19	pyrene	204-927-3	129-00-0		7.7 mg/kg		6.468 mg/kg	0.000647 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		3.4 mg/kg		2.856 mg/kg	0.000286 %	✓	
21	chrysene	601-048-00-0	205-923-4		2.8 mg/kg		2.352 mg/kg	0.000235 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		3.2 mg/kg		2.688 mg/kg	0.000269 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		1.5 mg/kg		1.26 mg/kg	0.000126 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		3 mg/kg		2.52 mg/kg	0.000252 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		1.6 mg/kg		1.344 mg/kg	0.000134 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.41 mg/kg		0.344 mg/kg	0.0000344 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		1.8 mg/kg		1.512 mg/kg	0.000151 %	✓	
Total:								0.0925 %		

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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: WS03

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

Sample details

Sample name:	LoW Code:	
WS03	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)
1.50-1.70 m		
Moisture content:		
21%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 21% 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	pH		PH		8 pH		8 pH	8pH		
2	arsenic { arsenic trioxide }				24 mg/kg	1.32	25.033 mg/kg	0.0025 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	1.9 mg/kg	1.285	1.929 mg/kg	0.00015 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	17.319 mg/kg	0.00173 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				200 mg/kg	1.126	177.89 mg/kg	0.0178 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	800 mg/kg		632 mg/kg	0.0632 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				1.3 mg/kg	1.353	1.39 mg/kg	0.000139 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				27 mg/kg	1.579	33.691 mg/kg	0.00337 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium selenosulfide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc chloride }				280 mg/kg	2.085	461.096 mg/kg	0.0461 %	✓	
	030-003-00-2	231-592-0	7646-85-7							
Total:								0.135 %		



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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: BH05[2]

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

Sample details

Sample name:	LoW Code:
BH05[2]	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)
1.20-1.40 m	
Moisture content:	
16%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% 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	pH		PH		7.9 pH		7.9 pH	7.9 pH		
2	arsenic { arsenic trioxide }				9.7 mg/kg	1.32	10.758 mg/kg	0.00108 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				13 mg/kg	1.462	15.96 mg/kg	0.0016 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				15 mg/kg	1.126	14.186 mg/kg	0.00142 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	20 mg/kg		16.8 mg/kg	0.00168 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				7.9 mg/kg	1.579	10.482 mg/kg	0.00105 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc chloride }				29 mg/kg	2.085	50.779 mg/kg	0.00508 %	✓	
	030-003-00-2	231-592-0	7646-85-7							
Total:								0.0123 %		



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
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

■ pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

■ 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

■ lead compounds with the exception of those specified elsewhere in this Annex (worst case)

GB MCL index number: 082-001-00-6
Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
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 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

■ 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

▪ **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

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

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

Worst case species based on hazard statements

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Absence of hexavalent chromium indicates it unlikely that zinc chromate is present within the site soils. Therefore next worst case has been selected. No matter the species selected, all samples still remain classified as hazardous.

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on hazard statements

zinc {zinc chloride}

Absence of hexavalent chromium indicates it unlikely that zinc chromate is present within the site soils. Next worst case compound with possible link to historic site use (police station) has been selected.

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2023.4.5471.10145 (04 Jan 2023)

HazWasteOnline Database: 2023.4.5471.10145 (04 Jan 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

**Jack Mather**

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Analytical Report Number : 22-95737

Project / Site name:	St Michaels, Manchester	Samples received on:	09/11/2022
Your job number:	C5128	Samples instructed on/ Analysis started on:	09/11/2022
Your order number:	C5128 3693 JM	Analysis completed by:	25/11/2022
Report Issue Number:	1	Report issued on:	25/11/2022
Samples Analysed:	3 10:1 WAC Samples		

Signed:

Dominika Warjan
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results							
Report No:	22-95737						
					Client: BSL		
Location	St Michaels, Manchester						
Lab Reference (Sample Number)	2494223 / 2494224				Landfill Waste Acceptance Criteria		
Sampling Date	07/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	WS01						
Depth (m)	0.50-0.70						
Solid Waste Analysis							
TOC (%)**	1.9				3%	5%	6%
Loss on Ignition (%) **	4.9				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, ID, CU, AL	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	8.19				100	--	--
pH (units)**	8.2				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	9.3				--	To be evaluated	To be evaluated
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)							
Arsenic *	0.0021			0.0182	0.5	2	25
Barium *	0.0907			0.773	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.016			0.13	0.5	10	70
Copper *	0.015			0.12	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0024			0.0203	0.5	10	30
Nickel *	0.0014			0.012	0.4	10	40
Lead *	0.034			0.29	0.5	10	50
Antimony *	0.57			4.8	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.018			0.15	4	50	200
Chloride *	0.63			5.3	800	15000	25000
Fluoride*	0.97			8.3	10	150	500
Sulphate *	35			300	1000	20000	50000
TDS*	96			820	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	5.40			46.1	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.90						
Dry Matter (%)	80						
Moisture (%)	20						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation							
** - MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results								
Report No:	22-95737							
					Client: BSL			
Location	St Michaels, Manchester							
Lab Reference (Sample Number)	2494225 / 2494226				Landfill Waste Acceptance Criteria			
Sampling Date	07/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	WS02							
Depth (m)	0.30-0.50							
Solid Waste Analysis								
TOC (%)**	1.4				3%	5%	6%	
Loss on Ignition (%) **	4.0				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, 1D, CU, AL	< 10				500	--	--	
Total PAH (WAC-17) (mg/kg)	6.60				100	--	--	
pH (units)**	8.2				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	9.0				--	To be evaluated	To be evaluated	
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)								
Arsenic *	0.0132			0.111	0.5	2	25	
Barium *	0.0111			0.0927	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0045			0.038	0.5	10	70	
Copper *	0.023			0.19	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	0.0242			0.203	0.5	10	30	
Nickel *	0.0015			0.012	0.4	10	40	
Lead *	0.0034			0.029	0.5	10	50	
Antimony *	< 0.0017			< 0.017	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.0075			0.063	4	50	200	
Chloride *	6.2			52	800	15000	25000	
Fluoride*	0.99			8.3	10	150	500	
Sulphate *	29			250	1000	20000	50000	
TDS*	120			1000	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	7.99			66.9	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.90							
Dry Matter (%)	86							
Moisture (%)	14							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.								
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation								
** - MCERTS accredited								

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

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Waste Acceptance Criteria Analytical Results								
Report No:	22-95737							
					Client: BSL			
Location	St Michaels, Manchester							
Lab Reference (Sample Number)	2494227 / 2494228				Landfill Waste Acceptance Criteria			
Sampling Date	07/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	BH01							
Depth (m)	0.30-0.50							
Solid Waste Analysis								
TOC (%)**	2.3				3%	5%	6%	
Loss on Ignition (%) **	5.6				--	--	10%	
BTEX (µg/kg)	< 10				6000	--	--	
Sum of PCBs (mg/kg)	< 0.007				1	--	--	
Mineral Oil (mg/kg) EH, ID, CU, AL	98				500	--	--	
Total PAH (WAC-17) (mg/kg)	8.49				100	--	--	
pH (units)**	8.4				--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	14				--	To be evaluated	To be evaluated	
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test			
	mg/l			mg/kg	using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)								
Arsenic *	0.0083			0.0689	0.5	2	25	
Barium *	0.0585			0.487	20	100	300	
Cadmium *	< 0.0001			< 0.0008	0.04	1	5	
Chromium *	0.0013			0.011	0.5	10	70	
Copper *	0.016			0.14	2	50	100	
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2	
Molybdenum *	0.0044			0.0367	0.5	10	30	
Nickel *	0.0007			0.0061	0.4	10	40	
Lead *	0.11			0.93	0.5	10	50	
Antimony *	1.4			12	0.06	0.7	5	
Selenium *	< 0.0040			< 0.040	0.1	0.5	7	
Zinc *	0.018			0.15	4	50	200	
Chloride *	0.92			7.7	800	15000	25000	
Fluoride*	0.40			3.3	10	150	500	
Sulphate *	14			120	1000	20000	50000	
TDS*	62			520	4000	60000	100000	
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-	
DOC	6.24			52.0	500	800	1000	
Leach Test Information								
Stone Content (%)	< 0.1							
Sample Mass (kg)	0.90							
Dry Matter (%)	83							
Moisture (%)	17							
Results are expressed on a dry weight basis, after correction for moisture content where applicable.					* = UKAS accredited (liquid eluate analysis only)			
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation					** - MCERTS accredited			

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 22-95737

Project / Site name: St Michaels, Manchester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2494223	WS01	None Supplied	0.50-0.70	Grey clinker with rubble.
2494225	WS02	None Supplied	0.30-0.50	Grey sand with rubble.
2494227	BH01	None Supplied	0.30-0.50	Gray sand with clinker

Analytical Report Number : 22-95737

Project / Site name: St Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	NONE
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025

Analytical Report Number : 22-95737

Project / Site name: St Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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Analytical Report Number : 22-98009

Project / Site name:	St Michaels, Manchester	Samples received on:	21/11/2022
Your job number:	C5128	Samples instructed on/ Analysis started on:	21/11/2022
Your order number:	C5128 3693 JM	Analysis completed by:	30/11/2022
Report Issue Number:	1	Report issued on:	30/11/2022
Samples Analysed:	10:1 WAC sample		


Signed:

Anna Goc
Junior Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

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Waste Acceptance Criteria Analytical Results							
Report No:	22-98009						
					Client: BSL		
Location	St Michaels, Manchester						
Lab Reference (Sample Number)	2507028 / 2507029				Landfill Waste Acceptance Criteria		
					Limits		
Sampling Date	17/11/2022				Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Sample ID	BH04						
Depth (m)	1.20-1.40						
Solid Waste Analysis							
TOC (%)**	1.4				3%	5%	6%
Loss on Ignition (%) **	2.8				--	--	10%
BTEX (µg/kg)	< 10				6000	--	--
Sum of PCBs (mg/kg)	< 0.007				1	--	--
Mineral Oil (mg/kg) EH, 1D, CU, AL	75				500	--	--
Total PAH (WAC-17) (mg/kg)	108				100	--	--
pH (units)**	8.0				--	>6	--
Acid Neutralisation Capacity (mmol / kg)	28				--	To be evaluated	To be evaluated
Eluate Analysis							
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0010			< 0.0100	0.5	2	25
Barium *	0.0099			0.0757	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0006			0.0043	0.5	10	70
Copper *	0.016			0.12	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0070			0.0535	0.5	10	30
Nickel *	0.0026			0.020	0.4	10	40
Lead *	0.0060			0.046	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.012			0.089	4	50	200
Chloride *	0.68			5.3	800	15000	25000
Fluoride*	0.16			1.2	10	150	500
Sulphate *	2.3			17	1000	20000	50000
TDS*	50			380	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	9.41			72.3	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.70						
Dry Matter (%)	81						
Moisture (%)	19						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation							
** = UKAS accredited (liquid eluate analysis only)							
** = MCFRTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 22-98009

Project / Site name: St Michaels, Manchester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2507028	BH04	None Supplied	1.20-1.40	Brown gravelly clay with brick.

Analytical Report Number : 22-98009

Project / Site name: St Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073B-PL	W	NONE
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073-PL	W	NONE
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031	W	ISO 17025

Analytical Report Number : 22-98009

Project / Site name: St Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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)



FWPY1-CKZGS-74B4Q

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

Job name

St Michaels Manchester

Description/Comments

Project

C5128

Site

St Michaels

Classified by

Name: **Jack Mather**
 Date: **22 Nov 2023 16:51 GMT**
 Telephone: **01606334844**
 Company: **Brownfield Solutions Limited**
173-183 Witton Street
Northwich
CW9 5LP

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:

CERTIFIED

Course

Hazardous Waste Classification

Date

09 Feb 2023

Next 3 year Refresher due by Feb 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Land between Bootle Street and Jackson's Row, Manchester

Post Code M2 5NH

SIC for the process giving rise to the waste

41100 Development of building projects

Description of industry/producer giving rise to the waste

Redevelopment of a derelict Synagogue and associated car park.

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

Waste created during a site investigation and during excavation of soils for development of a 41 storey mixed use building including basement complex.

Description of the waste

Mix of made ground and natural strata comprising predominantly gravelly sand with varying cobble content.



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	ASB05	0.00-1.40	Non Hazardous		3
2	TP03	0.20-1.80	Non Hazardous		4
3	TP03[2]	1.80-2.00	Non Hazardous		5
4	TP04	0.20-1.95	Non Hazardous		6
5	TP05	0.20-1.80	Hazardous	HP 14	7
6	TP06	0.20-2.10	Hazardous	HP 14	8
7	TP07	0.30-0.85	Non Hazardous		9
8	TP07[2]	0.85-1.60	Non Hazardous		10
9	TP07[3]	1.60-2.40	Non Hazardous		11
10	TP08	0.20-1.30	Non Hazardous		12
11	TP08[2]	1.30-2.10	Non Hazardous		13
12	WS04	3.10-3.60	Non Hazardous		14
13	WS07	2.90-3.60	Non Hazardous		16
14	WS08	3.00-3.50	Non Hazardous		18
15	WS05	2.90-3.90	Non Hazardous		20
16	WS09	3.00-3.40	Non Hazardous		22
17	WS09[2]	3.40-3.50	Non Hazardous		24

Related documents

#	Name	Description
1	BSL Suite	waste stream template used to create this Job

Report

Created by: Jack Mather

Created date: 22 Nov 2023 16:51 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	26
Appendix B: Rationale for selection of metal species	27
Appendix C: Version	27



Classification of sample: ASB05



Non Hazardous Waste

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

Sample details

Sample name:	LoW Code:	
ASB05	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)
0.00-1.40 m		

Hazard properties

None identified

Determinands

Moisture content: 0% 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	asbestos									
	650-013-00-6	-----	12001-28-4							
			132207-32-0							
			12172-73-5							
			77536-66-4							
			77536-68-6							
			77536-67-5							
			12001-29-5							
Total:								1.0e-07 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
<LOD	Below limit of detection

Classification of sample: TP03


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

Sample details

Sample name:	LoW Code:
TP03	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)
0.20-1.80 m	
Moisture content:	
17%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17% 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		copper { dicopper oxide; copper (I) oxide }			1	150 mg/kg	1.126	140.173 mg/kg	0.014 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
2		lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	1100 mg/kg		913 mg/kg	0.0913 %	✓	
		082-001-00-6									
3		zinc { zinc oxide }			1	160 mg/kg	1.245	165.298 mg/kg	0.0165 %	✓	
		030-013-00-7	215-222-5	1314-13-2							
Total:									0.122 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP03[2]

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

Sample details

Sample name:	LoW Code:
TP03[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.80-2.00 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% 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	 copper {  dicopper oxide; copper (I) oxide }				34 mg/kg	1.126	32.155 mg/kg	0.00322 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
2	 lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	85 mg/kg		71.4 mg/kg	0.00714 %	✓	
	082-001-00-6									
3	 zinc {  zinc oxide }				42 mg/kg	1.245	43.914 mg/kg	0.00439 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.0147 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP04


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

Sample details

Sample name:	LoW Code:
TP04	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)
0.20-1.95 m	
Moisture content:	
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	 copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1	120 mg/kg	1.126	120.245 mg/kg	0.012 %	✓	
2	 lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1900 mg/kg		1691 mg/kg	0.169 %	✓	
3	 zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2	420 mg/kg	1.245	465.274 mg/kg	0.0465 %	✓	
4	asbestos	650-013-00-6	-----	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
Total:								0.228 %		

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: TP05

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:
TP05	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-1.80 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
17%	
(wet weight correction)	

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

dicopper oxide; copper (I) oxide: (compound conc.: 0.28%)

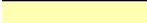
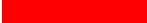
zinc oxide: (compound conc.: 0.196%)

Determinands

Moisture content: 17% 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	 copper { dicopper oxide; copper (I) oxide }				3000 mg/kg	1.126	2803.462	mg/kg	0.28 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
2	 lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	610 mg/kg		506.3	mg/kg	0.0506 %	✓	
	082-001-00-6										
3	 zinc { zinc oxide }				1900 mg/kg	1.245	1962.914	mg/kg	0.196 %	✓	
	030-013-00-7	215-222-5	1314-13-2								
Total:									0.527 %		

Key

	User supplied data
	Hazardous result
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP06

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:
TP06	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.20-2.10 m	
Moisture content:	
18%	
(wet weight correction)	

Hazard properties

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinands:

dicopper oxide; copper (I) oxide: (compound conc.: 0.157%)

zinc oxide: (compound conc.: 0.112%)

Determinands

Moisture content: 18% 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	 copper { dicopper oxide ; copper (I) oxide }			1	1700 mg/kg	1.126	1569.488 mg/kg	0.157 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
2	 lead {  lead compounds with the exception of those specified elsewhere in this Annex }				540 mg/kg		442.8 mg/kg	0.0443 %	✓	
	082-001-00-6									
3	 zinc { zinc oxide }				1100 mg/kg	1.245	1122.732 mg/kg	0.112 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.314 %		

Key

	User supplied data
	Hazardous result
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP07

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

Sample details

Sample name:	LoW Code:
TP07	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30-0.85 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 18% 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	 copper {  dicopper oxide; copper (I) oxide }				250 mg/kg	1.126	230.807 mg/kg	0.0231 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
2	 lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	580 mg/kg		475.6 mg/kg	0.0476 %	✓	
	082-001-00-6									
3	 zinc {  zinc oxide }				200 mg/kg	1.245	204.133 mg/kg	0.0204 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.0911 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP07[2]



Non Hazardous Waste

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

Sample details

Sample name:	LoW Code:
TP07[2]	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)
0.85-1.60 m	
Moisture content:	
14%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 14% 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		copper { dicopper oxide ; copper (I) oxide }			1	290 mg/kg	1.126	280.797 mg/kg	0.0281 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
2		lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	220 mg/kg		189.2 mg/kg	0.0189 %	✓	
		082-001-00-6									
3		zinc { zinc oxide }			1	120 mg/kg	1.245	128.454 mg/kg	0.0128 %	✓	
		030-013-00-7	215-222-5	1314-13-2							
Total:									0.0598 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP07[3]

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

Sample details

Sample name:	LoW Code:
TP07[3]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.60-2.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% 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	 copper {  dicopper oxide; copper (I) oxide }				40 mg/kg	1.126	37.83 mg/kg	0.00378 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
2	 lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	50 mg/kg		42 mg/kg	0.0042 %	✓	
	082-001-00-6									
3	 zinc {  zinc oxide }				77 mg/kg	1.245	80.508 mg/kg	0.00805 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.016 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP08


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

Sample details

Sample name:	LoW Code:	
TP08	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)
Moisture content:		
14%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% 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		copper { dicopper oxide; copper (I) oxide } 029-002-00-X215-270-71317-39-1			1	210 mg/kg	1.126	203.335 mg/kg	0.0203 %	✓	
2		lead { lead compounds with the exception of those specified elsewhere in this Annex } 082-001-00-6									
3		zinc { zinc oxide } 030-013-00-7215-222-51314-13-2									
Total:									0.054 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: TP08[2]

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

Sample details

Sample name:	LoW Code:
TP08[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.30-2.10 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
20%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 20% 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	 copper {  dicopper oxide; copper (I) oxide }				56 mg/kg	1.126	50.44 mg/kg	0.00504 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
2	 lead {  lead compounds with the exception of those specified elsewhere in this Annex }			1	62 mg/kg		49.6 mg/kg	0.00496 %	✓	
	082-001-00-6									
3	 zinc {  zinc oxide }				72 mg/kg	1.245	71.696 mg/kg	0.00717 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.0172 %		

Key

	User supplied data
	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
CLP: Note 1	Only the metal concentration has been used for classification



Classification of sample: WS04

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

Sample details

Sample name:	LoW Code:	
WS04	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)
3.10-3.60 m		
Moisture content:		
14%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% 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	pH		PH		9.3 pH		9.3 pH		9.3 pH		
2	arsenic { arsenic trioxide }				4.6 mg/kg	1.32	5.223 mg/kg		0.000522 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg		<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg		<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				11 mg/kg	1.462	13.826 mg/kg		0.00138 %	✓	
		215-160-9	1308-38-9								
6	copper { dicopper oxide; copper (I) oxide }				9.4 mg/kg	1.126	9.102 mg/kg		0.00091 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	18 mg/kg		15.48 mg/kg		0.00155 %	✓	
	082-001-00-6										
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg		<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dihydroxide }				12 mg/kg	1.579	16.3 mg/kg		0.00163 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg		<0.000141 %		<LOD
	034-002-00-8										
11	zinc { zinc oxide }				27 mg/kg	1.245	28.902 mg/kg		0.00289 %	✓	
	030-013-00-7	215-222-5	1314-13-2								
12	naphthalene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		205-917-1	208-96-8								
14	acenaphthene				<0.05 mg/kg		<0.05 mg/kg		<0.000005 %		<LOD
		201-469-6	83-32-9								



#	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							
15	fluorene	201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16	phenanthrene	201-581-5	85-01-8		0.05 mg/kg		0.043 mg/kg	0.0000043 %	✓	
17	anthracene	204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
18	fluoranthene	205-912-4	206-44-0		0.08 mg/kg		0.0688 mg/kg	0.00000688 %	✓	
19	pyrene	204-927-3	129-00-0		0.08 mg/kg		0.0688 mg/kg	0.00000688 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
21	chrysene	601-048-00-0	205-923-4	218-01-9	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
22	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
23	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
28	benzene	601-020-00-8	200-753-7	71-43-2	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
29	toluene	601-021-00-3	203-625-9	108-88-3	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
30	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
31	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]	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
Total:								0.0094 %		

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

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

Sample details

Sample name:	LoW Code:
WS07	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)
2.90-3.60 m	
Moisture content:	
6.1%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 6.1% 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	pH		PH		8.6 pH		8.6 pH	8.6 pH		
2	arsenic { arsenic trioxide }				4.5 mg/kg	1.32	5.579 mg/kg	0.000558 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				27 mg/kg	1.462	37.055 mg/kg	0.00371 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	13.744 mg/kg	0.00137 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	10 mg/kg		9.39 mg/kg	0.000939 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				26 mg/kg	1.579	38.562 mg/kg	0.00386 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc oxide }				60 mg/kg	1.245	70.127 mg/kg	0.00701 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.0179 %		



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: WS08

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

Sample details

Sample name:	LoW Code:
WS08	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)
3.00-3.50 m	
Moisture content:	
8.8%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.8% 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	pH		PH		8.4 pH		8.4 pH	8.4 pH		
2	arsenic { arsenic trioxide }				6.8 mg/kg	1.32	8.188 mg/kg	0.000819 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				18 mg/kg	1.462	23.993 mg/kg	0.0024 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	13.349 mg/kg	0.00133 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	8.5 mg/kg		7.752 mg/kg	0.000775 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				17 mg/kg	1.579	24.489 mg/kg	0.00245 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc oxide }				36 mg/kg	1.245	40.866 mg/kg	0.00409 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
12	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
14	acenaphthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9							



#	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							
15	fluorene	201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16	phenanthrene	201-581-5	85-01-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
17	anthracene	204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
18	fluoranthene	205-912-4	206-44-0		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
19	pyrene	204-927-3	129-00-0		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
20	benzo[a]anthracene	601-033-00-9	200-280-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
21	chrysene	601-048-00-0	205-923-4		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0124 %		

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: WS05



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

Sample details

Sample name:	WS05	LoW Code:	
Sample Depth:	2.90-3.90 m	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	6.7%	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
	(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 6.7% 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	pH		PH		8.2 pH		8.2 pH	8.2 pH		
2	arsenic { arsenic trioxide }				4.9 mg/kg	1.32	6.036 mg/kg	0.000604 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				14 mg/kg	1.462	19.091 mg/kg	0.00191 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	12.605 mg/kg	0.00126 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	13 mg/kg		12.129 mg/kg	0.00121 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				18 mg/kg	1.579	26.526 mg/kg	0.00265 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc oxide }				30 mg/kg	1.245	34.84 mg/kg	0.00348 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
12	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		205-917-1	208-96-8							
14	acenaphthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9							



#	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							
15	fluorene	201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16	phenanthrene	201-581-5	85-01-8		0.12 mg/kg		0.112 mg/kg	0.0000112 %	✓	
17	anthracene	204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
18	fluoranthene	205-912-4	206-44-0		0.25 mg/kg		0.233 mg/kg	0.0000233 %	✓	
19	pyrene	204-927-3	129-00-0		0.21 mg/kg		0.196 mg/kg	0.0000196 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.09 mg/kg		0.084 mg/kg	0.0000084 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.11 mg/kg		0.103 mg/kg	0.0000103 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.09 mg/kg		0.084 mg/kg	0.0000084 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.07 mg/kg		0.0653 mg/kg	0.00000653 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.06 mg/kg		0.056 mg/kg	0.0000056 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		0.06 mg/kg		0.056 mg/kg	0.0000056 %	✓	
28	benzene	601-020-00-8	200-753-7		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
29	toluene	601-021-00-3	203-625-9		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
30	ethylbenzene	601-023-00-4	202-849-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
31	xylene	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
Total:								0.0117 %		

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: WS09

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

Sample details

Sample name:	LoW Code:
WS09	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)
3.00-3.40 m	
Moisture content:	
7.2%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.2% 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	pH		PH		9.5 pH		9.5 pH	9.5 pH			
2	arsenic { arsenic trioxide }				5.5 mg/kg	1.32	6.739 mg/kg	0.000674 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %			<LOD
	048-010-00-4	215-147-8	1306-23-6								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				15 mg/kg	1.462	20.345 mg/kg	0.00203 %	✓		
		215-160-9	1308-38-9								
6	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	13.583 mg/kg	0.00136 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	21 mg/kg		19.488 mg/kg	0.00195 %	✓		
	082-001-00-6										
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel dihydroxide }				18 mg/kg	1.579	26.384 mg/kg	0.00264 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %			<LOD
	034-002-00-8										
11	zinc { zinc oxide }				47 mg/kg	1.245	54.289 mg/kg	0.00543 %	✓		
	030-013-00-7	215-222-5	1314-13-2								
12	naphthalene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
		205-917-1	208-96-8								
14	acenaphthene				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
		201-469-6	83-32-9								



#	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							
15	fluorene	201-695-5	86-73-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
16	phenanthrene	201-581-5	85-01-8		0.07 mg/kg		0.065 mg/kg	0.0000065 %	✓	
17	anthracene	204-371-1	120-12-7		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
18	fluoranthene	205-912-4	206-44-0		0.1 mg/kg		0.0928 mg/kg	0.00000928 %	✓	
19	pyrene	204-927-3	129-00-0		0.09 mg/kg		0.0835 mg/kg	0.00000835 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
21	chrysene	601-048-00-0	205-923-4		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
Total:								0.0146 %		

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: WS09[2]



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

Sample details

Sample name:	LoW Code:
WS09[2]	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)
3.40-3.50 m	
Moisture content:	
12%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12% 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	pH		PH		8.4 pH		8.4 pH	8.4 pH		
2	arsenic { arsenic trioxide }				2.8 mg/kg	1.32	3.253 mg/kg	0.000325 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
3	cadmium { cadmium sulfide }			1	<0.2 mg/kg	1.285	<0.257 mg/kg	<0.00002 %		<LOD
	048-010-00-4	215-147-8	1306-23-6							
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1.2 mg/kg	1.923	<2.308 mg/kg	<0.000231 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
5	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				19 mg/kg	1.462	24.437 mg/kg	0.00244 %	✓	
		215-160-9	1308-38-9							
6	copper { dicopper oxide; copper (I) oxide }				5.9 mg/kg	1.126	5.846 mg/kg	0.000585 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	5.2 mg/kg		4.576 mg/kg	0.000458 %	✓	
	082-001-00-6									
8	mercury { mercury dichloride }				<0.3 mg/kg	1.353	<0.406 mg/kg	<0.0000406 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel dihydroxide }				15 mg/kg	1.579	20.849 mg/kg	0.00208 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405 mg/kg	<0.000141 %		<LOD
	034-002-00-8									
11	zinc { zinc oxide }				32 mg/kg	1.245	35.051 mg/kg	0.00351 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
Total:								0.00983 %		



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

■ lead compounds with the exception of those specified elsewhere in this Annex

GB MCL index number: 082-001-00-6

Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2

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 2A (Sup 7, 87) 2006; Lead REACH Consortium
www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

■ pH (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ 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

■ 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

▪ **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

Appendix B: Rationale for selection of metal species

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Absence of hexavalent chromium indicates it unlikely that lead chromate is present within the site soils.

zinc {zinc oxide}

Absence of hexavalent chromium indicates it unlikely that zinc chromate is present within the site soils. Furthermore, the presence of ash suggests oxides of zinc will be present.

arsenic {arsenic trioxide}

Worst case species based on hazard statements

cadmium {cadmium sulfide}

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

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

Worst case species based on hazard statements

mercury {mercury dichloride}

Worst case species based on hazard statements

nickel {nickel dihydroxide}

Worst case species based on hazard statements

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on hazard statements

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2023.325.5817.10787 (21 Nov 2023)

HazWasteOnline Database: 2023.325.5817.10787 (21 Nov 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

GB MCL List v2.0 - version 2.0 of 20th October 2023

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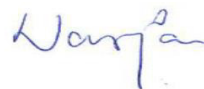
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f: 01923 237404
e: reception@i2analytical.com

e: n.swallow@brownfield-solutions.co.uk

Analytical Report Number : 23-68893

Project / Site name:	St. Michaels, Manchester	Samples received on:	14/11/2023
Your job number:	S5128	Samples instructed on/ Analysis started on:	14/11/2023
Your order number:		Analysis completed by:	21/11/2023
Report Issue Number:	1	Report issued on:	21/11/2023
Samples Analysed:	1 10:1 WAC sample		



Signed:

Dominika Warjan
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



4041



Environmental Science

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Waste Acceptance Criteria Analytical Results							
Report No:	23-68893						
				Client: BSL			
Location	St. Michaels, Manchester						
Lab Reference (Sample Number)	2879007 / 2879008			Landfill Waste Acceptance Criteria			
Sampling Date	01/11/2023			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample ID	WS05						
Depth (m)	2.90-3.90						
Solid Waste Analysis							
TOC (%)**	0.3			3%	5%	6%	
Loss on Ignition (%) **	1.5			--	--	10%	
BTEX (µg/kg)**	< 5.0			600	--	--	
Sum of PCBs (mg/kg)**	< 0.007			1	--	--	
Mineral Oil (mg/kg) BH, ID, CU, AL	< 10			500	--	--	
Total PAH (WAC-17) (mg/kg)	< 0.85			100	--	--	
pH (units)**	7.0			--	>6	--	
Acid Neutralisation Capacity (mmol / kg)	0.00			--	To be evaluated	To be evaluated	
Eluate Analysis	10:1			10:1	Limit values for compliance leaching test		
	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)							
Arsenic *	< 0.0010			< 0.0100	0.5	2	25
Barium *	0.0150			0.150	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	0.0017			0.017	0.5	10	70
Copper *	0.017			0.17	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	0.0026			0.0258	0.5	10	30
Nickel *	0.0028			0.028	0.4	10	40
Lead *	0.0042			0.042	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.018			0.18	4	50	200
Chloride *	0.48			4.8	800	15000	25000
Fluoride*	0.13			1.3	10	150	500
Sulphate *	18			180	1000	20000	50000
TDS*	42			420	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.79			67.9	500	800	1000
Leach Test Information							
Stone Content (%)	56						
Sample Mass (kg)	0.20						
Dry Matter (%)	93						
Moisture (%)	6.7						
Results are expressed on a dry weight basis, after correction for moisture content where applicable.							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation							
** = UKAS accredited (liquid eluate analysis only)							
** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.

Analytical Report Number : 23-68893

Project / Site name: St. Michaels, Manchester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
2879007	WS05	None Supplied	2.90-3.90	Brown sand with stones.

Analytical Report Number : 23-68893
Project / Site name: St. Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270.	L064-PL	D	MCERTS
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073B-PL	W	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260. Refer to CoA for analyte specific accreditation	L073-PL	W	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025

Analytical Report Number : 23-68893
Project / Site name: St. Michaels, Manchester

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by EC probe using a factor of 0.6.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L031-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK or A' analysis have been carried out in our laboratory in the United Kingdom (WATFORD).

For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).

For method numbers ending in 'PL or B' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30°C.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
-	Operator - understore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total

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